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ABSTRACT

The project report provides information relevant to the status, function, and effect of currently used definitions of handicapped children and the diagnostic methods used. An initial section serves as both an introduction to and summary of the process used during the project, and includes project conclusions. Section II contains analyses of policies in the following areas: mentally retarded, deaf and hard of hearing, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically and other health impaired, multihandicapped, deaf-blind, identification, evaluation, placement, age of eligibility, and severity. A third section consists of chapters that review the literature and focus on each category of disabiliy mentioned in P.L. 94-142, Education for All Handicapped Children Act (except learning disabilities) and on the processes of identification, evaluation, and placement. The final section is the project bibloography. Appended are state-by-state policy charts. (SBH)

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An Analysis of Categorical Definitions, Diagnostic Methods, Diagnostic Criteria and Personnel Utilization in the Classification of Handicapped Children

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Section I

INTRODUCTION AND CONCLUSIONS

INTRODUCTION

The purpose of Public Law 94-142, the Education for All Handicapped Children Act of 1975, is to insure that every handicapped child who is in need of a special education receives that education. Of significant importance then in translating this Act from rhetoric to practice is the determination by State, intermediate, and local agencies of eligible children. This determination usually involves teachers and a variety of other specialized personnel who are competent in identifying and evaluating these children. Ultimately, decisions on which children are eligible for special education occur when these personnel match the results of an evaluation of each child with the applicable existing State definition of handicapped children. It is from this point that the appropriate program is established for each child.

In recognizing the significance of this process and especially of the State definitions that are in use, the Bureau of Education for the Handicapped (BEH) contracted with The Council for Exceptional Children (CEC) in October 1976 to conduct a project titled "An Analysis of Categorical Definitions." The major purpose of the project was to produce a document that would help BEH and particularly their State Plan Officers to understand better the state of definitions and associated practices as described in State policy in relation to the requirements of Public Law 94-142. As a complementary activity, the project conducted a comprehensive review of the literature and produced summaries to accompany the policy descriptions. Finally, a series of conclusions regarding the workings of these policies in the States in relation to Public Law 94-142 was drawn.

Organization of the Report

This report is divided into four major sections. The first section consists entirely of this chapter, which is intended to serve as both an introduction to and a summary of the process used during the project as well as to present the conclusions. The second section is another single chapter titled Policy Summary that is based upon the policy analysis. The third section consists of chapters that review the literature and focus on each category of disability mentioned in Public Law 94-142 (except learning disabled) and on the processes of identification, evaluation, and placement. The final section is the project bibliography. The appendix includes State-by-State policy charts.

Policy and Literature Data Bases

In order to conduct this project an extensive amount of information had to be identified, reviewed, selected, organized, and analyzed. Since two distinct data bases were used, two distinct strategies were required.

The objective of the policy search was to obtain official information relevant to the status, function, and effect of currently used definitions of handicapped children and to the diagnostic methods.

and criteria used in making classification decisions in all States. The data base utilized to conduct the search activities included State statutes, State administrative regulations and procedures, and major Federal program materials. (Throughout this report, the word policy is used to designate this body of material.) This data base is housed in the Policy Research Center of The Council for Exceptional Children.

Initial tasks involved a comprehensive review of the considerable volume of material on special education statutes, regulations, and other administrative policy in the CEC Policy Research Center. The purpose of this review was to ascertain which laws, bills, amendments, rules, policies, guidelines, and regulations were actually in effect and were relevant to the project. Relevancy for the purpose of the project was determined with reference to the child flow process set forth in the Act. Policies which were primarily related to administrative responsibilities, structure, and organization were deemed not relevant to the research. Policies concerning finance, planning, private institutions, facilities, special services, and personnel benefits were also omitted.

Using the information gained from the above process, profiles for each State were constructed. The profiles presented the policies from both the statutes and regulations of the individual State. There were six main policy areas covered in these profiles. The first was the definitions for the various exceptional classifications; the second was the criteria used to determine eligibility for the classification; the third was the procedures used to identify children in need of special education services; the fourth was the evaluation of those children in need of special education services to determine if they are eligible and, if they are, for which classification. This information is primarily presented in this report in the charts appearing in the appendix.

Concurrently with the development of the State profiles and subsequent summaries, procedures to verify the data base were undertaken. One of the primary procedures was a comprehensive request to the State education agency of each State for all laws and regulations relative to special education policy. As the responses were received, the States' profiles and summaries were revised accordingly. A companion verification procedure was the use of legal citators, statutory tables, and State codes to check the most current statutes against the project's data base. Where differences were discovered, the appropriate changes in the State profiles and summaries were made.

The literature search used involved analysis of references located by means of 21 computer searches in four data bases, a backward examination of primary sources quoted in recent references, and monitoring of current literature as it was received or heard about at the CEC Information Center during the life of the project. These computer data bases were computer searched: the Exceptional Child data base, the ERIC data base, Dissertation Abstracts, and Psychological Abstracts. In all cases analysis proceeded backward from the most recent with emphasis on literature of the last three years, excepting primary sources quoted by

major authors which may have gone back as far as ten or more years. Searches based on categorical handicapping conditions and searches based on noncategorical types of descriptors were run to locate literature with both emphases. Four basic searches were run for each handicapping condition based on (1) definitions and criteria, (2) identification and screening, (3) evaluation, and (4) placement. Numbers of descriptors per search ranged from 20 to approximately 80.

An initial search and analysis of the mental retardation literature in the Exceptional Child data base was intended as a pilot search to aid in the formulation of a more complete search strategy. Descriptors and abstracts were searched for the term "definition" and "definitions." A group of about 75 terms dealing with testing and evaluation and terms concerned with identification and placement were used to obtain the most recent 300 references of these aspects of mental retardation. Abstracts were checked, actual documents located and read, and relevant sections copied and filed.

Results of this initial search and later searches led to the exclusion of some topics as peripheral to the main focus of the project. Evaluations or descriptions of specific tests were eliminated, though recommended test batteries for placement purposes were included. Most of the literature on the dangers of labeling was eliminated because it was repetitive and because most of these ideas were found to be included in authors' discussions of definitions and placement practices. Literature on the disadvantaged was excluded unless it related directly to one of the handicapping conditions within the project's domain (such as mental retardation). The literature on specific medical syndromes involving mental retardation was not examined in depth, as it was felt most of these were contained under the rubric of severe and multiple handicaps. An infinite number of subcategories of learning disability were discovered, dependin on the particular theorist doing the analysis. All such subcategories were considered within the broader learning disability category if the author described them as specific variations of learning disability. Teacher education was felt to be peripheral to the basic parameters of the project's literature search. The broad area of early childhood education was strictly limited to screening, definitions, and early identification of specific conditions. Literature on the advantages of early childhood education (including the prevention of handicapping conditions) and on early identification in general was not included. Literature on student placement in other than day-school situations (institutionalization) was not included except as a part of a continuum of placement options recommended by various authors. Few foreign references were included. Results of the first and later searches also led to inclusion of such terms as "criteria," "psychodiagnosis," "informal assessment," "observation techniques," "census," "policy," and "legislation."

In the Exceptional Child data base, three searches for each handicapping condition were conducted and analyzed. These covered the areas of definitions, identification and evaluation, and placement. Additionally, a search based on the same descriptors but eliminating documents indexed with specific handicapping conditions was performed. Also, a search specifically on Child Study Teams and Team Placement was run due

to a relative shortage of references for this area. These searches resulted in a total of approximately 1,200 abstracts, many of which were selected by more than one search.

A similar strategy was employed in the ERIC data base in one large search including all handicapping conditions. In this search all references submitted by the ERIC Clearinghouse on Handicapped and Gifted were eliminated because they would automatically have been selected by searches of the Exceptional Child data base.

The search of Psychological Abstracts was conducted after consultation with the main information specialist of the American Psychological Association. Her recommended strategy was followed and resulted in approximately 200 references, most of which were already in the Exceptional Child searches. A small number of relevant references were located through this search. Relevant references of doctoral dissertations of the last two years were located through a search of Dissertation Abstracts. Abstracts of these dissertations were obtained and added to the literature file.

The second phase of the literature search began when a further analysis of authoritative documents led to the examination of sources contained within them. Many of these were already in the literature file. References not already in the literature file were checked, and relevant sections were added. This approach resulted in a thorough review of all recent literature and a selected review of older literature using the selection criterion of citation by recent authors.

A continuing part of the second phase of the literature search was the monitoring of current literature as it arrived in the Information Center. Further searches to assure comprehensiveness will be run in the Exceptional Child data base as new literature is added.

A third category of information that was collected and reviewed for possible use within the project included policy statements from a variety of professional and nonprofessional organizations involved with handicapped children. Of 46 organizations originally contacted, 26 sent their existing policy statements and/or position papers. These are listed below:

American Foundation for the Blind
National Association of Social Workers
National Rehabilitation Association
Association of University-Affiliated Facilities, Developmental Disabilities
Alexander Graham Bell Association for the Deaf
American Academy of Pediatrics
American Psychological Association
Conference of Executives of American Schools for the Deaf
National Association of State Directors of Special Education
Council on Education of the Deaf
National Association for Retarded Citizens
National Foundation--March of Dimes
National Easter Seal Society for Crippled Children and Adults

United Cerebral Palsy Association
National Association of Coordinators of State Programs for the Mentally Retarded
National Epilepsy Foundation
National Association of School Psychologists
American Optometric Association
Muscular Dystrophy Association
Association for Supervision and Curriculum Development
Association for Childhood Education International
National Education Association
Council for Administrators of Special Education/CEC
Division on Career Development/CEC
Division for Children with Learning Disabilities/CEC
Division for Children with Communication Disorders/CEC

Limitations

As has been indicated, the project conducted comprehensive information collection and analysis activities. Yet, despite these efforts, there are some limitations to the information presented in this report. Those experienced with policy analysis, particularly from a 50-State perspective, are well aware of the difficulty of obtaining current State policy. It is because of this awareness that so much effort was devoted not only to collecting the State policies, but also to verifying their accuracy. Despite these efforts, however, it is possible that some of the recorded information is simply not correct. Readers should also be cognizant of the fact that the State policy used was restricted to State education agencies only and was believed to be in effect in July 1977.

Readers of the report will also notice that the learning disabilities category was not included in the study. This exclusion occurred at the request of the Bureau of Education for the Handicapped.

Another factor also potentially limiting the full accuracy of the reported policy information is interpretation. Throughout the analysis, especially of the State policy information, it was necessary to make judgments as to the relationship with Public Law 94-142. In all such situations, the project staff attempted to lean toward strict interpretation in relation to Public Law 94-142. It was felt that such a focus would be of greatest use to the BEH staff as they used the report.

One further limitation must be brought to the attention of the reader. In planning the study, it was originally intended that some description and analysis of the required qualifications of the various personnel involved in the identification, evaluation, and placement of handicapped children would be included in this final report. CEC was especially interested in attempting to assess relationships between emerging personnel training requirements and Public Law 94-142. Unfortunately, after a number of alternative and futile attempts to obtain current and accurate information for the various disciplines,

the effort was abandoned in favor of what was felt to be the more immediately needed information.

Acknowledgments

While there are a number of persons who contributed to this project, special acknowledgments must be extended to the following external reviewers who provided useful critiques of an early draft of this report: Nancy C. Ackerman, The National Easter Seal Society for Crippled Children and Adults; Lyndal M. Bullock, University of Louisville; Arthur Centor, American Psychological Association; Arselia S. Ensign, Michigan Department of Education; A. C. Fremont, Santa Clara Valley Medical Center; Herbert J. Grossman, Neuropsychiatric Institute, UCLA; Alice H. Hayden, University of Washington; Mary C. McLean, The Public Schools of Springfield, Massachusetts; William M. McLin, Epilepsy Foundation of America; Catherine Moore, National Association of Retarded Citizens; Don L. Partridge, Texas Education Agency; Maynard C. Reynolds, University of Minnesota; Melvyn I. Semmel, Indiana University; Susan Jay Spungin, American Foundation for the Blind, Inc.; Leon Sternfeld, United Cerebral Palsy; R. M. Gettings, National Association of Coordinators of State Programs for the Mentally Retarded; Charles Kokaska, California State University, Long Beach; and M. Angele Thomas, The Council for Exceptional Children.

Also participating in this process were: James Blank, George Clark, Donald P. Cross, Doris D. Ferris, Joseph Finnegin, Michael Fogarty, Paula Goldberg, Katherine L. Gott, Richard Lombard, Verne Petrie, Judith Pokorni, Paul Retish, Ellen Rhicard, Janet Rickarby, R. B. Rutherford, Jr., Marguerite Stasz, George Taylor, Warren Umansky, Jacqueline Walker, and Ada Weiner.

Other important reaction to the draft came from a number of BEH personnel who participated in a roundtable discussion with the project staff.

It is also essential to recognize the important role of Dr. Joseph Rosenstein, BEH Project Officer, who throughout this project provided patient guidance and significant assistance.

Finally, special thanks must go to a number of CEC staff who made important contributions to this project from beginning to end. These include Fred Weintraub, Scottie Torres Higgins, Josephine Baressi, Joni Cohan and Alan Abeson.

Ellen Wells, also of the CEC staff, requires special recognition for effectively carrying out the production of this report.

CONCLUSIONS

Throughout this project, the underlying premise regarding the purpose of definitions and the processes that together produce a classification system is that in relation to P.L. 94-142, such systems are needed to insure that children who participate in special education programs are handicapped and as a result are in need of special education. Thus, the key is not whether a child has a handicapping condition but whether, as a result of that handicap, the child is in need of special education and related services. To the extent that definitions and accompanying criteria for program eligibility establish a framework within which the process of appropriate identification, evaluation and educational programming can be accomplished for individual children, such definitions and criteria are appropriate. In order for appropriate educational programming to be accomplished then the emphasis must be placed on the procedures involved in initial identification, evaluation and development of individualized education programs. With this premise as background, the major conclusions reflecting the policy and literature review done by this project are presented. These are directed to the attention of Bureau of Education for the Handicapped personnel involved in various aspects of reviewing implementation of P.L. 94-142.

1. To review the effects of a state classification and evaluation system requires consideration of the nature of the criteria and the degree of specificity in which they are stated in policy.

As is recognized, the use of any type of classification system for any purpose is organized around sets of categories and subcategories. It is the categories and subcategories that are generally referred to as the labels. What is of primary importance, however, to reviewers of public policy and its implementation with regard to the use of the totality of the classification system are the specific criteria that are stated and the manner in which they are determined for subsequent decisions.

One example in the context of this study is the use of the phrase "adaptive behavior" in the definition of mental retardation, which was found in the policy of 30 states. This study determined that measurable criteria as to the determination of "deficits in adaptive behavior" simply are not widely in use. In fact, it was noted that in some states where the AAMD definition (the origin of the phrase and the P.L. 94-142 definition) was adopted as the policy for the definition of mental retardation, no assessment of adaptive behavior was required. Another example relates to the P.L. 94-142 definition of seriously emotionally disturbed, which contains the qualifying phrase "over a long period of time and to a marked degree." One further example is inclusion within the phrase "adversely affects a child's educational performance," which is found in each of the Federal categorical definitions.

Use of the latter phrase clearly reflects both the latest thinking within the field and the desirability of defining children as a function of educational rather than other less relevant considerations. Generally, it was found that state policy is moving in this same direction. However, such policies seem to be more associated with those categories of children

who demonstrate the least different educational functioning from the norm. The policy governing the more severely handicapped have traditionally been defined by quantitative terms and tend to be less well developed in terms of considering educational criteria.

A final criteria concern focuses upon the differential classification of mildly handicapped children. It was observed during this study that all states regardless of whether their statutory definitions are categorical or non-categorical, use similar criteria for the selection, identification and evaluation of these children. Although somewhat arguable, the literature seems to indicate that the children classified as being in the categories of educable mentally retarded, specific learning disabled, or mildly emotionally disturbed have more characteristics in common than different regarding their educational programming. Further, the literature emphasized that in view of the overlapping criteria often seen with these children, the need for using qualified personnel to conduct identification, evaluation and placement activities is all the more important.

Finally, it appears that while generally the categories and subcategories that are used within state policy are similar, some variance can occur between and within states in practice as a function of the paucity of criteria and means for their determination that are specified.

2. Existing definitions and criteria for their determination found in state policy and the literature appear to provide greater emphasis on educational functioning for the less severely handicapped and more reliance on medical characteristics for the more severely handicapped.

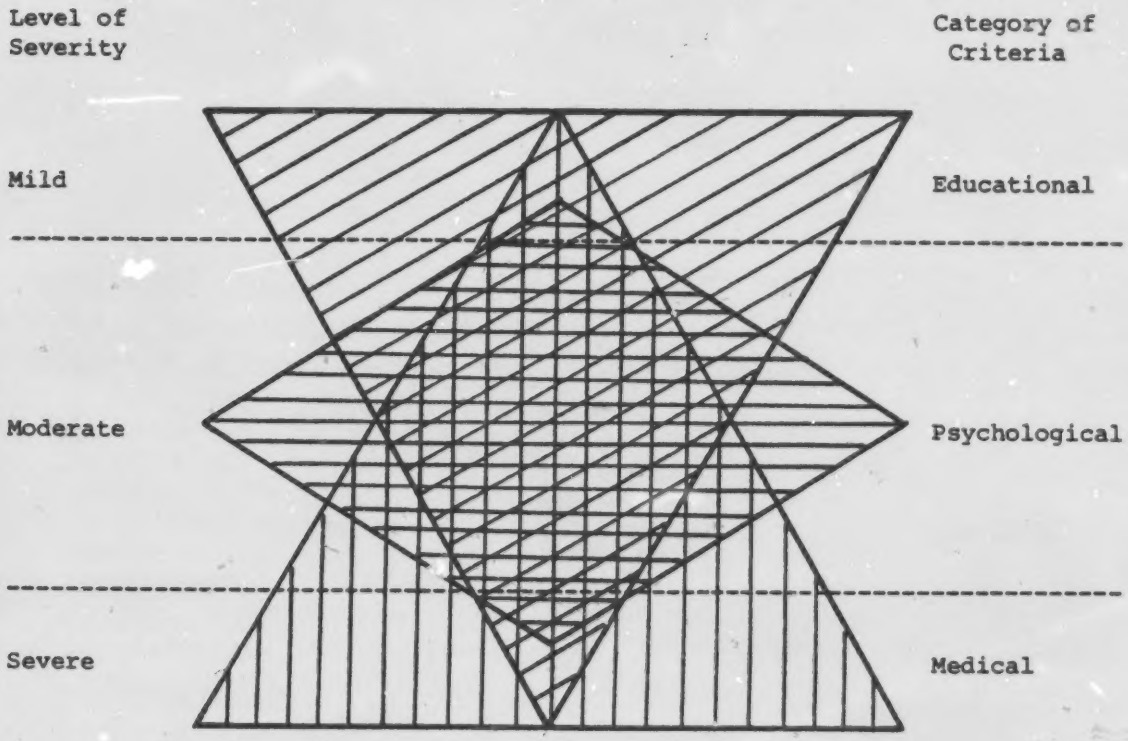
Of primary concern in defining handicapped children is the appropriate use of educational criteria in determining who is and isn't eligible for special education and related services. To some degree, the use of educational versus medical and psychological criteria varies depending upon the purpose of classification, such as instruction or medical treatment; upon the nature of the suspected handicapping condition such as learning disability or orthopedic impairment; and the degree of severeity of the handicap. In order to provide appropriate educational programming for handicapped children, educational, psychological and medical information must all be considered. Generally, it was observed in both the policy and literature that educational criteria for eligibility are more extensively used in identifying children with mild handicapping conditions but decreased in usage as the handicapping condition increases in severity. At the same time, it was seen that medical criteria for selection are more extensively used in identifying children with severe handicapping conditions with less usage as the handicapping condition decreases in severity. Psychological criteria for selection are most extensively used in identifying children with moderate handicapping conditions with reduced usage for the more severe and more mild handicapping condition. This relationship is depicted in the model below in which the following definitions apply.

- Medical - Definitions or criteria based on etiological and physical terminology. Example: visual acuity levels.

- Psychological - Definitions or criteria based on psychometric or psychiatric terminology. Example: I.Q. scores.

- Educational - Definitions or criteria based on terminology describing academic performance in the classroom or on tests of academic functioning. Example: reading achievement by grade level.

Categories of Criteria Used in the Definition of Handicapping Conditions in Children



It appears that where state policy specifies criteria for the consideration of and collection of all three categories of information, it can lead to the wisest use of resources and the greatest understanding of the child's strengths and deficits and in the planning of the appropriate program.

3. With the exception of the mentally retarded, visually handicapped and hearing handicapped, definitions in state policy do not generally recognize levels of severity of handicapping condition.

One of the findings of this project is that existing definitions and related policies in state policy devote limited attention to the level of severity of various categories of handicapped children. This is particularly

true for those categories where descriptions of the children cannot be placed in quantitative terms, such as intelligence quotients, decibels or loss of vision. Policies regarding children who are learning disabled, seriously emotionally disturbed or speech handicapped rarely include reference to severity. Typically, the children who are most often considered within a severity construct are the mentally retarded, visually handicapped and hearing handicapped.

The literature suggests that classification systems, whether categorical or noncategorical, should account for levels of severity in their definitions, since one of the purposes of a classification system is to facilitate communication regarding characteristics of handicapping conditions. The defining characteristics for such terms as "mentally retarded" or "emotionally disturbed" or "learning disabled" frequently encompass too much to be useful for purposes of educational programming. The frequently accepted AAMD definition for mental retardation provides a model for establishing levels of severity based on multiple criteria. States utilizing the AAMD definition, however, frequently do not, as previously indicated, also adopt the established criteria differentiating levels of severity according to both measured intelligence data and adaptive behavior data.

The literature also pointed out that severely handicapped children, including those with conbinations of two or more severe handicaps, have significantly different evaluation and educational programming needs from children who are classified with the same handicapping conditions but are mildly handicapped. Recognition of the special needs of the severely handicapped in classification systems can facilitate appropriate evaluation and educational programming. At the same time, however, that the literature calls for the use of severity indicators, it is emphasized that factors used to determine severity be those that relate to educational functioning. One recommendation, for example, is that the legal/medical definition of blindness based on acuity should be replaced by a system of categories differentiated by severity of functional impairment.

Specifically related to the severity concern is perhaps one of the greatest discrepancies observed between state definitional policy and P.L. 94-142, as well as the literature regarding the status of socially maladjusted children. The P.L. 94-142 regulation specifies that the term seriously emotionally disturbed, "... does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed." This requirement is inconsistent with existing policy in all states with definitions for this category with the exception of Indiana and North Carolina.

4. <u>While to some degree the development of state policy regarding the identification of handicapped children is somewhat limited, it is possible that state provisions regarding the determination of served and unserved children may be related to this process.</u>

Despite the assumed provision for child find activities in Annual Program Plans, as required by P.L. 93-380, it appears that 27 states have not yet adopted specific policy concerning identification. Many states, however, have policy in place that is directed toward determination of served and unserved children. While not perfectly synonomous, the latter activities may or could be related to identification activities. Among the types of activities that are included within the "determination" category are policy that are used for interagency case review, child find, and census. Evaluators of states regarding identification should be aware of these potentially similar activities that may in practice be linked.

5. It appears that while the majority of states have policy in force mandating the use of multi-faceted and multidisciplinary evaluation procedures, as well as restrictions preventing decisions being made on single criteria, there is limited attention to some related requirements regarding evaluation and placement.

Policy is presently in force in five states specifying that, "Evaluation materials have been validated for the specific purpose for which they are used....", in five states regarding specific consideration of the child's "mode of communication" or specific handicap in relation to performance on various instruments and procedures and in fifteen states requiring that, "... at least one teacher or other specialist with knowledge in the area of suspected disability...." be a member of the evaluation team. These findings suggest that, while there is general adherence to the essential "principles" regarding evaluation in the Act, there is limited specific policy regarding implementation.

Throughout the literature, there is support for these "principles" with particular emphasis on consideration of more than test data. Numerous recommendations are presented for the inclusion of personnel in the evaluation process that are aware of and can assess individual children's "levels of performance", thus underscoring the necessity for teachers or similar staff to be involved. Justification for these suggestions are evident from the example that hearing impaired children should not be placed in educational programs solely on the basis of decibel loss without considering their language ability and the age of onset of the hearing loss. Similarly, the literature called for using evaluation of mentally retarded children using both adaptive behavior criteria and intelligence criteria. With regard to visually handicapped children with measured visual acuity levels of 20/200 who are considered legally blind, it was pointed out that some children are able to read printed material, whereas others may need to read braille. Emphasized is that it is the second factor that should determine educational programming rather than the determination of legal blindness.

6. At present, it appears that in some states where there is an absence of specific policy regarding placement in the least restrictive environment coupled with limited educationally focused eligibility criteria, there may be a tendency for the use of traditional placement options.

As is well recognized, the least restrictive environment provisions of P.L. 94-142 are among the most controversial. From the traditional perspective of the use of policy, implementation should not occur until appropriate policy has been adopted. If that is the case, there is, after reviewing state policy, reason for concern, since only 33 states at the time of this review had policy in place regarding the use of the least restrictive environment approach to placement.

A related concern is that definition by which a child is determined to be eligible for and in need of special education and related services must not determine the child's educational program. When definitions determine placement options for children without regard to educational and other performance within the range of characteristics associated with the definition, such systems are clearly misapplied. Ultimately, P.L. 94-142 requires that the program provided must be tailored to the child, not the "definition" attached to the child. For example, a child with 20/200 visual acuity is often classified, as a function of policy, as "visually impaired." If as a result of that sole criterion in the definition the child is placed in a school for the blind to learn braille, the definition is inappropriately determining the child's placement and educational experience. If, however, determination that the child is "visually impaired" results in educational programming based on the child's assessed need for reading instruction for social/emotional development and other educational relevant needs, the definition is being appropriately applied.

Finally, this conclusion reinforces the necessity for policy evaluators to review identification, evaluation, placement and reevaluation policies in total rather than as individually operating processes. The decisions made during each of these steps should form a chain in a sequence of information gathering and tentative programs. This review of state policy found that in some instances the articulation from one process to another was unclear, leaving space for error or uncertainty to enter the child flow.

7. Although state policy is specific with regard to the use of "admissions" committees and the personnel that constitute such committees, there appear to be discrepancies with P.L. 94-142 and the literature.

Despite the fact that the majority of states (33) maintain policy regarding the development of individualized education programs or similar statements, there is discrepancy between the P.L. 94-142 requirements governing the types of participants that are to be involved in the process. Thirty-three states require a multidisciplinary effort with 30 specifying the involvement of an administrator/supervisor. As might be expected, a relatively large number of states specify that an evaluator or person knowledgeable about evaluation such as a psychologist or psychometrist also be involved. It is with regard to the other P.L. 94-142 required participants that there is discrepancy. In 15 states the child's teacher must be a participant, in ten the child, and in 17 a parent. In summary, the literature reinforces the P.L. 94-142 requirement for the involvement of a variety of people that possess information that can lead to the development of an appropriate individualized education program and placement. Of some concern, however, to some authors is the phenomenon of too

many people being involved -- that is, including individuals who may have information that is not directly related to the IEP process. One example is the necessity for first conducting a comprehensive interdisciplinary evaluation for children with relatively mild but well understood speech handicaps where the required treatment programs are relatively straightforward.

When discussing the process normally used for child entry into special education programs, the literature and policy as well refer to the use of admission committees. Traditionally, the role of the "admissions committee" was to determine the presence of a specific disability with the automatic assumption that if a disability did exist, then placement in the special class for children so disabled was the appropriate action. Public Law 94-142, in contrast, clearly distinguishes between the two processes of eligibility determination -- that is, a child possesses a handicap that adversely affects educational performance and, therefore, is eligible for special education and related services and the preparation of the IEP which is program design including placement. Inappropriate implementation of the current directives can contribute to a failure to produce meaningful IEPs, and in particular, continue the practice of making placement decisions on the basis of definitions.

Section II

POLICY SUMMARY

Any study of the definitions, criteria and diagnostic procedures used in the classification of handicapped children must be sensitive to the complexity of these subjects. Each topic in and of itself is formidable because of the sheer amount of policy and literature that exists. Of special importance, however, is the compounding effect that occurs when considering the interrelationships between definitions, criteria and procedures.

Significant recognition of these problems came from the Hobbs national classification project, where it was reported that,

> In some way or another, all states use some type of labeling or categorization of handicapped children, although there are different styles seen from one state to another (Gallagher, Forsythe, Ringelheim, and Weintraub in Hobbs, 1975).

What this project found was that these "different styles" are apparent in terms of (a) the definitions used to distinguish one category of handicap from another, (b) the diagnostic procedures related to one handicap or another, and finally, (c) the relationship between the collected data and the pre-established criteria that determine which label is assigned to which child.

In the definition area alone, it was found that there is in state law and official policy across the country variance which is reflected not only by the specific criteria and procedures used to define and determine a handicap but also by the categories used to classify children. Most often, states list physically handicapped, educable, trainable, or severely mentally retarded, emotionally disturbed, speech handicapped, visually handicapped, hearing handicapped and learning disabled as handicapping conditions. Yet in some states, other terms are used which, in some cases, may be synonymous for a category above, a subcategory, or a totally different category. A further and obviously related complexity occurs in at least Massachusetts, where handicapped children are described broadly as having learning, communicative, behavioral, or physical impairments or in others as simply children with special needs.

In addition to appreciating the complexity of these subjects, it is of significance to especially emphasize the tremendous importance of definitions, and also the criteria and diagnostic procedures in terms of their impact on children, and upon the consequent administrative and fiscal decision making. Clearly, one of the reasons for BEH undertaking this study was to gain some understanding of the relationship between children defined as eligible for special education by P.L. 94-142, and similar policies operating within the states. Further, it is possible to speculate that the workings and interworkings of definitions, criteria and procedures may play a significant role in planning by some public and private agencies at a variety of governmental levels. The process used is that a particular agency casts or applies a definition,

seeks the number of children who meet the definition, and from those numbers projects teacher, space, equipment, support personnel and virtually all other resource requirements for programming for handicapped children. Further, definitions also impact heavily on teacher training programs in terms of both the content of those programs and the need over time for personnel in each of the categorical areas as well as certification standards themselves.

The Key Issues

In part because of the previously described complexity of the content and in part to meet the information requirements of BEH for this study, six major issues were addressed by the research. It is hoped that the information contained in the remainder of this document contributes to their clarification:

1. The extent of variation that exists in definitions, criteria and procedures as seen in state policy and in the literature;

2. The prevalence of educational versus etiological definitions and criteria in policy;

3. The approaches taken within definitions to "severity" of handicapping condition;

4. The degree and the manner in which definitions account for age;

5. The variance and trends associated with methods used for identification and evaluation of handicapped children;

6. The effects of the variations in definitions, criteria and procedures in determining which categories of children are determined eligible or ineligible and for what services.

Findings

Handicapped Children

P.L. 94-142 defines handicapped children as children who have been evaluated,

> ... as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired or as having specific learning disabilities, who because of those impairments need special education and related services (Sec. 121a.5(a)).

This study found that 31 states use similar definitions of handicapped children which are essentially categorical. The definitions used usually describe handicapped children as those children determined by an appropriate committee or specialist as being mentally retarded, emotionally disturbed, orthopedically or physically handicapped, deaf, visually impaired, learning disabled and speech impaired.

For example, Alabama policy defines exceptional children as those who have been certified,

> ... by specialists as being unsuited for enrollment in regular classes of the public schools or who are unable to be educated or trained adequately in such regular programs, including but not limited to the mild and moderately to severely retarded, but not including the profoundly retarded; the speech impaired; the crippled and those having other physical handicaps not otherwise specifically mentioned herein; the emotionally conflicted; the socially maladjusted; those with special learning disabilities; the multiply handicapped; and the intellectually gifted (Sec. 1, Act 106).

Nebraska simply states that,

> Handicapped children shall mean either physically handicapped, educable mentally handicapped, emotionally disturbed, specific learning disability children, mentally retarded or other such children as shall be defined by the State Department of Education.

Nineteen states describe exceptional children as those who differ from the average or normal in physical, mental or emotional characteristics to the extent that they cannot be appropriately educated in the regular classroom. Kansas, for example, defines exceptional persons as those who,

> ... differ in physical, mental, social, emotional or educational characteristics to the extent that special education services are necessary to enable them to progress toward the maximum of their abilities or capacities (H.B. 1672, 1974).

Missouri similarly provides that handicapped children are those who, "because of mental, physical, emotional or learning problems, require special educational services in order to develop to their maximum capacity" (R.S.M. Sec. 162.675).

Massachusetts policy alone presents a definition of handicapped children which seems to be non-categorical in nature. This definition describes an exceptional child as one who,

> ... because of temporary or more permanent adjusting difficulties or attributes arising from intellectual, sensory, emotional or physical factors, cerebral dysfunction, perceptual factors, or other specific learning disabilities, or any combination thereof, is unable to progress effectively in a regular school program and requires special classes, instruction periods or other special education services in order to successfully develop his individual educational potential (Chapter 71B).

Massachusetts is the only state which has no definitional categories for the various handicapping conditions in its laws or regulations. Of interest is that the basic term "handicapped children" is used in only 23 states. The term "exceptional children" is used in 20 states. Among the other terms used are "children with special educational needs"; "child with exceptional educational needs" and "pupils with handicapping conditions." No policy defining handicapped children could be located for the District of Columbia.

The review of the literature in this area revealed that the definitions used tended not to list types of "handicapped children," but rather described conditions or educational needs which differentiate an exceptional child from the norm. According to Smith and Neisworth (1975),

> The way most authors in the field of special education have chosen to define exceptional children can be illustrated by the following three definitions:
>
> An exceptional child is,
>
> a child who deviates from the average or normal child (1) in mental characteristics, (2) in sensory abilities, (3) in neuromuscular or physical characteristics, (4) in social or emotional behavior, (5) in communication abilities, or (6) in multiple handicaps to such an extent that he requires a modification of school practices, or special educational services, in order to develop to his maximum capacity (Kirk, 1972, p. 4).
>
> An exceptional pupil is so labeled only for that segment of his school career (1) when his deviating physical or behavioral characteristics are of such a nature as to manifest a significant learning asset or disability for special education purposes; and, therefore, (2) when, through trial provisions, it has been determined that he can make greater all-around adjustment and scholastic progress with direct or indirect special education services than he could with only a typical regular school program (Dunn, 1973, p. 7).
>
> The exceptional child shall be considered to be one whose educational requirements are so different from the average or normal child, that he cannot be effectively educated without the provision of special educational programs, services, facilities, or materials (Gearheart, 1972, p. 2).
>
> They add,
>
> Of course, it is important to know something about the prominent characteristics of those to whom professional attention is being directed, and this is obviously the point of the prevailing definitions. That is, most definitions have focused on attributes, deficiencies, or defects of the child.

It appears that this approach of describing exceptional children by their special educational needs may be regarded as having merit by policymakers as well. Such intent can be inferred from the P.L. 94-142 approach, which means that not all handicapped children are eligible for special education, but rather only those "who because of those impairments need special education and related services." Of importance are recent actions taken by two states. In South Dakota's statute, which became effective on July 1, 1977, the definition used is,

> Children in need of special assistance and children in need of prolonged assistance means any person under the age of twenty-one years who is a resident of the state of South Dakota and who, because of his educational needs as defined by the state board of education, is not adequately provided for through the usual facilities and services of the school and requires special education.

Alaska statute and regulation provides another example.

> Exceptional children means children who differ markedly from their peers to the degree that they are better served by placement in a special learning program designed to serve their particular exceptionality; these children may be identified in the following categories ... (14.30.35).
>
> Exceptionality for educational purposes is necessarily defined in terms of performance in usual education activities. Educational performance is often related to medical problems (organic pathology), however, the processes of medical problems is not a sufficient basis for classifying a child as educationally exceptional unless it can be shown that said problem is detrimentally affecting the child's learning process (Special Education Handbook, Alaska Department of Education).

It must be added that these are the only two states that, as of this study, seem to have embraced this approach in policy. Yet, as will be seen later, this concept is sometimes applied to individual categories of exceptionality.

Apart from each state's policy definitions of "handicapped children," they all (again with the exception of Massachusetts) have definitions that address the various areas of handicapping conditions. Frequently, the criteria that the states use to distinguish one category from another is contained within these further definitions. The emphasis given by this project relating to criteria was to focus primarily on the process requirements in P.L. 94-142 that yield criteria. At the same time, however, some criteria related observations occurred. Since this data was collected and reviewed by the P.L. 94-142 categories, it will be presented in the same way.

MENTALLY RETARDED

P.L. 94-142 defines mental retardation as:

> "Mentally retarded" means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance (121a.5(i)(4)).

From the review of definitions contained within state policy, and displayed in Chart I, it was determined that all states with the exception of Louisiana, Massachusetts, South Dakota and West Virginia use some type of definition of mental retardation. Further analysis of the policies reveals that much variance was found in the states in relation to the four qualifying factors contained in the P.L. 94-142 definition.

Subaverage General Intellectual Functioning

On the first of these factors, "subaverage general intellectual functioning," the policies of all but nine states contain similar language. Frequently found as well was the qualifying factor dealing with an adverse affect upon education, which was found in all but seven states as indicated on Chart I. The major discrepancies, however, appear in relation to "adaptive behavior" and "developmental period." Thirty states presently use policies containing the former, while only 16 possess the latter.

It appears from this review of the policies that the states to a large degree attempt, at some point in the process of selecting mentally retarded children, to quantify the results of their evaluations. The three approaches used to quantify the severity of "subaverage general intellectual functioning" involved the use of the intelligence quotient, a standard deviation variance, or an expressed fraction of normal functioning or rate of development. Table 1 presents this information

Table 1

Severity Levels of Mental Retardation and Quantification Approaches by State

Level of Severity	IQ Range	Standard Deviation Range	Fractions of Normal Level
Educable/Mild	AL ND	AK NM	ME
	DE OH	AR NY	MS
	ID OK	FL TX	MO
	IN PA	GA VA	VT
	KY RI	MD	TN
	NV UT	MI	
	NC WA	MT	

Table 1 - Cont'd

Level of Severity	IQ Range	Standard Deviation Range	Fractions of Normal Level
Trainable/Moderate	AL ND	AK NY	GA
	DE OK	AR TX	ME
	ID PA	FL VA	MS
	IN RI	MD	MO
	KY UT	MI	VT
	NV WA	MT	TN
	NC	NM	
Profound/Severe	DE PA	FL	ME
	IN RI	GA	TN
	NV WA	MD	
	NC	MT	

Deficits in Adaptive Behavior

The existence of the phrase "adaptive behavior," in all likelihood borrowed from the AAMD definition of mental retardation, was absent from the policy of 17 states, as indicated on Chart I. Of the remaining 30 states which included this term, such inclusion did not appear to be matched by criteria for assessing such functioning particularly in the social/emotional category.

Developmental Period

It has been determined that the most significant discrepancy between state and Federal policy occurs with respect to this criterion. Only 15 states contain language which requires that subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior "manifest during the developmental period." It is noteworthy that two states, Alabama and Connecticut, add language which allows for such deficits to occur later in the child's life. This would appear to include children who are functionally retarded due to some injury or accident occurring after the developmental period.

Educational Performance Affected

Every state which defines mental retardation in policy appears to require that educational performance be adversely affected. In three states, however, such an observed effect is implied rather than stated in policy. These states are Indiana, Tennessee, and Wyoming. While all states required such a policy, no criteria for quantifying the severity of this factor could be determined.

Other Criteria

From this review, it appears that state definitions regarding the mentally retarded devote no attention to the etiology of the condition. Rather

the emphasis is upon functioning, which in the area of intellectual functioning is often expressed in terms of a quantified judgment. No special attention is devoted to different than usual age eligibility for mentally retarded students.

Severity

A major finding of potential consequence was that policy in 32 states make no specific reference to education for children who are severely mentally retarded, as indicated in Table 2. Eight other states, however, use definitions of mental retardation that are absent of any subcategories, which may mean that such children can be included. In interpreting this information, it must be understood that in some states, the responsibility for serving severely mentally retarded children is not based in the education agency, which means that such children may be eligible for and are receiving services. However, since the policy data used for this project was state education agency data, such situations were not revealed.

Table 2

State Policy Subcategories for Definitions of Mental Retardation

States	Categories		
	Educable	Trainable	Severe
AL	x	x	
AK	x	x	x
AZ	x	x	
AR	x	x	
CA	---- no ----------	subcategories	----------
CO	---- no ----------	subcategories	----------
CT	x	x	x
DE	x	x	x
GA	x	x	x
HI	x	x	x
ID	x	x	x
IL	x	x	
IN	x	x	x
IA	---- no ----------	subcategories	----------
KS	x	x	x
KY	x	x	
MA	----------	non-categorical	----------
ME	x	x	x
MD	x	x	x
MI	x	x	
MN	---- no ----------	subcategories	----------
MS	x	x	
MO	x	x	x
MT	x	x	x

Table 2 - Cont'd

States	Categories		
	Educable	Trainable	Severe
NB	x		
NV	x	x	x
NH	---- no ----------	subcategories ----	-------
NJ	x	x	x
NM	x	x	
NY	x	x	
NC	x	x	x
ND	x	x	
OH	x	x	
OK	x	x	
OR	---- no ----------	subcategories ----	-------
PA	x	x	x
RI	x	x	x
SC	x	x	
TN	x	x	x
TX	x	x	
UT	x	x	
VT	x	x	
VA	x	x	
WA	x	x	x

IQ Evaluation and Placement

Also indicated in Chart I is that 30 states have language in their statutes or administrative policy which seem to match the Federal requirement that all tests and other evaluation materials be provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so. This finding is particularly important in regard to the classification of children as mentally retarded in light of the frequent criticisms that traditional psychometric measures are discriminatory.

One final aspect of the policy review worth emphasizing in this categorical area is that the policies of 14 states contain language that nullify the "education for all" thrust of the Act. An example is from Illinois where eligibility is related to a potential for learning by defining educable mentally retarded as those children able to profit from an education designed to make them economically self-supporting. In addition to Illinois, other states in this category include Arizona, Connecticut, Delaware, Indiana, Kentucky, Mississippi, Nebraska, North Dakota, New Jersey, Ohio, Oklahoma, South Carolina, and Utah.

Table 3 presents in summary form the apparent consistency between the P.L. 94-142 definition of "mentally retarded" and those used in the states. In order to be judged consistent with P.L. 94-142, the state definition as a whole had to first contain the same or similar language as the corresponding Federal definition. If, however, the language was not the same, the thrust of the definition could be considered consistent if based on the child's ability to perform educational tasks. This reflects the position in the law that a handicapping condition does not exist unless there is adverse educational performance. The state language also had to reflect a zero reject orientation. Finally, the definition could contain no language obviously inconsistent with P.L. 94-142, such as relating eligibility to a potential for learning.

Table 3

State Requirements for Mentally Retarded
In Relation to P.L. 94-142

	State Requirements As Stated Appear Less Than 94-142	State Requirements As Stated Appear Consistent with 94-142	States With No Definition
Overall	AK NB	AL	LA
	AZ NV	CO	MA
	AR NH	DC	SD
	CA NJ	FL	WY
	CT NM	GA	
	DE NY	HI	
	ID ND	MD	
	IL OH	MO	
	IN OK	MT	
	IA PA	NC	
	KS SC	OR	
	KY TN	RI	
	ME TX	UT	
	MI VA	VT	
	MN WA	WI	
	MS WY		
	# = 32	# = 15	# = 4
Subaverage General Intellectual Functioning	IN OH		
	MN WY		
	MI		
	# = 5		
Adaptive Behavior	AZ NV		
	CA NH		
	CT NY		
	DE ND		
	IN OK		
	KS SC		
	KY TX		
	MI VA		
	MN		
	# = 17		

Table 3 - Cont'd

	State Requirements As Stated Appear Less Than 94-142	State Requirements As Stated Appear Consistent with 94-142	States With No Definition
Developmental Period	AK IA AR KS AZ KY CA ME CT MI DE MN ID MS IL NB IN NV NH PA NJ SC NM TN NY TX ND VA OH WA OK WY # = 32		
Educational Performance	IN TN WY # = 3		

DEAF AND HARD OF HEARING

Public Law 94-142 defines deaf and hard of hearing as follows:

> "Deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance (121a.5(b)(1)).
>
> "Hard of hearing" means a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance but which is not included under the definition of "deaf" in this section (121a.5(b)(3)).

A review of current state policy in relation to P.L. 94-142 indicates that many states do not provide separate definitions for the deaf and the hard of hearing. As is indicated in Chart II, several states use the single category, hearing impaired. Children generally included under this category are those whose residual hearing is not sufficient to enable them to understand the spoken word and to develop language, thus causing deprivation in learning and communication, or, these children exhibit a hearing loss which presents full awareness of environmental sounds and spoken language, limiting normal language acquisition and learning achievement (e.g., Colorado, Delaware, Georgia, Illinois).

As is indicated, other states have adopted different criteria for hearing impaired children. In these states hearing impaired children are defined as those with hearing losses which are educationally and developmentally handicapping and include those children who may be classified as deaf, as well as those who may be classified as hard of hearing (e.g., Idaho, Mississippi, North Carolina, Rhode Island). Another definition of hearing impaired exists in other states where a hearing impairment is defined as one which adversely affects the children's ability to function in the regular educational setting (e.g., Arizona, Michigan, Nevada). Often children who would be eligible under this category are placed under another broad category known as "communication disorders." This is found in the state policies of Kansas and Maryland. The states of New Jersey and Texas define these children as "auditorilly handicapped."

A common state practice is the use of a specific decibel loss as the criteria for eligibility into deaf-hearing impaired programs. However, the range of decibel loss varied from a 20 dB in New Mexico and Colorado to a 40 dB in New York and the District of Columbia. The state of Arkansas requires audiological criteria expressed in decibel loss as the sole criteria for eligibility. Alaska, the District of Columbia, Nevada, and Wisconsin require certification for program eligibility from either an audiologist or physician.

Age is frequently a determinate for program eligibility for hearing impaired children. Three states -- Delaware, Montana and Nevada -- offer services from birth. Eight states' policy specifically requires infant or pre-school programs for hearing impaired children in Connecticut, North Dakota, Oklahoma, South Carolina, and Tennessee in addition to the three

previously named states. The following table presents an analysis of states using a combined or separate policy definition for deaf and hearing impaired.

Table 4

Combined, Separate or No Definitions
Of the Deaf and Hard of Hearing
in State Policy

States Having Combined Definitions		States Having Separate Definitions		States Having No Definitions For This Category
AL	MI	AK	NY	CT
AZ	MT	DC	NC	LA
*AR	NV	FL	OH	MA
CA	*NJ	HI	OK	MN
CO	*NM	IA	OR	SD
DE	*ND	MS	TN	WV
GA	PA	MO	UT	WY
*ID	*RI	NB	VT	
IL	SC	NH		
IN	TX			
KS	VA			
KY	WA			
ME	*WI			
MD				

*Denotes those states that use a combined definition but have specific additional criteria for both categories of deaf and hard of hearing.

In preparing Chart II, judgments related to the relationship between state policy and P.L. 94-142 were first based upon the state definition, which as a whole had to first contain the same or similar language as the corresponding Federal definition. If, however, the language was not the same, the thrust of the definition could be considered consistent if based on the child's ability to perform educational tasks. This reflects the position in the law that a handicapping condition does not exist unless there is adverse educational performance. In the case of deaf and hard of hearing definitions, a single category of hearing impairment was judged to be consistent with P.L. 94-142 if oriented to educational performance. The state language also had to reflect a zero reject orientation. Finally, the definition could contain no language obviously inconsistent with P.L. 94-142, such as relating eligibility to a potential for learning.

Since educational performance is considered to be a key issue with regard to whether or not state policy is consistent with the requirements of P.L. 94-142, it should be noted that much state policy referred to a child's ability to use hearing either for "ordinary purposes of life" or specifically for the development of speech and language. Whenever a state's definition of the deaf or hearing impaired included either of these criteria, it was judged to be consistent with the definitions set forth in P.L. 94-142.

SPEECH IMPAIRED

Public Law 94-142 defines:

> "Speech impaired" as a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance (Sec. 121a.5(b)(10)).

Analysis of current state policy regarding the classification of "speech impaired" reveals three major findings. First, slightly more than half of the states (27) have policy that appear consistent with P.L. 94-142 requirements. Second is that nine states, at the time of this study, did not have in policy a definition of speech impaired. The third finding indicated that 14 states and the District of Columbia have state requirements that appear to be less than the P.L. 94-142 definition. These states fall into two categories: those who do not include an "adverse affect on educational performance" criterion; and those states that do not include "communication disorders." This information is presented in Chart IV.

Multiple Disabilities

Substantial variance in state policy exists with regard to the inclusion of multiple disabilities or handicapping conditions within the definition of speech impaired. For example, nineteen states, as indicated in Table 5, include "hearing impaired, learning disabled or children with foreign non-standard dialects" as part of the definition of speech impaired.

Table 5

States Placing Multiple Handicaps
Under Definition of Speech Impaired

AL	ME
CA	MS
CO	NB
FL	NC
HI	NM
IA	SC
ID	TN
IN	VT
KS	WA
MD	

Criteria for Eligibility

Further analysis of state policy indicates the finding of note that the six states of Georgia, Kentucky, Nevada, Tennessee, Utah, and Washington rely solely on the decision of a speech and/or communication disorders specialist for program eligibility. What was not discernible,

however, was the distinction between the category of special education and related services. As is known in actual implementation of services, practices may vary from school district to school district. Additional analyses would have to be generated at the local education agency level to determine the number of localities that are treating speech impaired children from the special education or related service perspective.

VISUALLY HANDICAPPED

Public Law 94-142 defines the visually handicapped as follows:

> "Visually handicapped" means a visual impairment which, even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children (121a.5(b)(11)).

In reviewing current state policy for this category of handicapped children, the two major factors considered were the relationship of the impariment with educational performance and the use of language that combined blind and partially seeing children. As will be seen from Chart V, discrepancies are found with regard to both of these factors in some states. It is important to note that, at the time of this study, Connecticut, Louisiana, Massachusetts, Minnesota, South Dakota, West Virginia, and Wyoming did not have state policy defining the category of visually handicapped.

As previously described, in relation to other categories, in order for state policy to be judged consistent with P.L. 94-142, all of the following criteria were present: the same or similar language as the corresponding definition in the P.L. 94-142 regulations was used; if the language was not the same, the thrust of the definition could be considered to be consistent with P.L. 94-142 if based on the child's ability to perform educational tasks; the language must reflect a zero reject orientation; and there can be no language in the definition which is obviously inconsistent with the spirit of P.L. 94-142, such as relating program eligibility to a potential for learning.

As is seen in Chart V, thirteen states did not include adverse educational performance as a criterion for eligibility according to state policy. In these states no relationship was drawn between the child's visual impairment and subsequent educational performance. The second most common criterion used by the states in policy to select visually handicapped children is visual acuity. Such stipulations are found in 26 states (Table 6). Thirteen states made use of medical criteria. Two states, California and Nebraska, listed the category of visually impaired under a larger classification of the physically handicapped and the state policy does not specifically mention visual impairment. Further, the state policy in fifteen states as displayed in Table 6 define visually impaired children in terms of their need to use braille or large-print instructional materials.

Table 6

Selected State Policy Criteria for Determining
The Eligibility of
Visually Handicapped Children

States Using Medical Criteria	States Placing Visual Acuity Limitations		Use of Braille/ Large-Print Material As Eligibility Criteria	
AL	AL	NV	CO	OH
DE	AK	NJ	DC	TN
IN	AZ	NM	GA	
MD	CO	NY	HI	
MS	DE	NC	ID	
NV	DC	ND	KS	
NM	HI	OH	KY	
NY	IN	OK	MO	
OK	KY	OR	MS	
OR	MD	RI	NC	
RI	MI	VT	ND	
UT	MS	VA	NH	
WA	MO	WA	NJ	

After reviewing the state policies and the project created criteria for measurement, it was concluded that 28 states possessed definitions consistent with P.L. 94-142. These are indicated in Chart V by those states with two plus symbols.

SERIOUSLY EMOTIONALLY DISTURBED

Public Law 94-142 defines seriously emotionally disturbed as follows:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

(A) An inability to learn which cannot be explained by intellectual, sensory, or health factors;

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;

(C) Inappropriate types of behavior or feelings under normal circumstances;

(D) A general pervasive mood of unhappiness or depression; or

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed (121a.5(b)(8)).

A review of current state policy considered three main factors for determining child eligibility under this definition. The first is that the child's condition must exhibit one or more of the listed characteristics over a long period of time and to a marked degree. Behaviors related to passing adjustment problems or temporary home crises would not be sufficient to merit special education under this definition.

The second factor is that this condition must adversely affect educational performance. The educational performance referred to is that of the child with the serious emotional disturbance. In some states a child may be classified as emotionally disturbed if his condition hinders the educational performance of the other students or presents a disruptive influence which hinders the learning atmosphere of the educational setting (e.g., Michigan, Montana). In addition, four states (Kentucky, New Hampshire, New Jersey, and Ohio) have specific language which requires a prediction that the eligible child "can profit" from this educational intervention. The third factor is that the term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

Chart VI presents the definitions for seriously emotionally disturbed children currently in use in the fifty states and the District of Columbia as well as the judgment of their consistency with P.L. 94-142. As used with all categories, in order for state policy to be judged consistent with P.L. 94-142, all of the following criteria must be present.

The same or similar language as the corresponding definition in the P.L. 94-142 regulations. This means that the state's definition must include the three factors discussed above.

If the language is not the same, the thrust of the definition may be considered to be consistent with P.L. 94-142 if it is based on the child's ability to perform educational tasks. The P.L. 94-142 definitions are based upon handicapping conditions adversely affecting the child's educational performance. The premise is that a handicapping condition does not exist unless there is adverse educational performance to the child in question.

The language must reflect a zero reject orientation except that it must contain exclusionary criteria for the socially maladjusted.

There can be no language in the definition which is obviously inconsistent with the spirit of P.L. 94-142, such as relating eligibility to a potential for learning.

Analysis of state policy indicates additional eligibility criteria for the category of seriously emotionally disturbed as stated in laws and regulations. Almost 50% of the states included behavioral characteristics in their definitions which covers the following behaviors: inappropriate behaviors, depression, inappropriate relationships, etc. Six states (Connecticut, Massachusetts, Michigan, Montana, Oregon and Rhode Island) include schizophrenic and autistic behaviors. As noted in the specific subpart of the P.L. 94-142 definition, (E)(ii), the Federal law specifically does not include the children who are "socially maladjusted." Table 8 indicates those states that have included socially maladjusted children in their state policy.

Table 7

State Policy Regarding Inclusion/
Exclusion of Socially Maladjusted

States Included		Specifically Excluded
AZ	MT	IN
CT	NH*	NC
DE	NV	
GA	OK	
IL	OR	
KS*	PA	
ME	SC	
MI	WI	

* Kansas - "aggressive and/or anti-social actions"
New Hampshire - "unable to make social adjustments"

ORTHOPEDICALLY IMPAIRED AND OTHER HEALTH IMPAIRED

Public Law 94-142 defines orthopedically impaired and other health impaired as follows:

> "Orthopedically impaired" means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., poliomyelitis, bone tuberculosis, etc.) and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures). "Other health impaired" means limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance (121a.5(b)(6).

A review of current state policy indicates that most states do not use two separate definitions for orthopedically impaired and other health impaired. Most states typically have a single category that applies to physically handicapped children. This category generally includes children who have orthopedic impairments, motor impairments, and physical health conditions that are congenital or acquired.

Once again, in order for state policy to be judged consistent with P.L. 94-142, as displayed in Chart III, the project used criteria that required the same or similar language as the corresponding definition in the P.L. 94-142 regulations, and that if the language was not the same, the thrust of the definition was considered to be consistent with P.L. 94-142 if based on the child's ability to perform educational tasks. Since the P.L. 94-142 definitions are based upon handicapping conditions adversely affecting the child's educational performance, particular attention was given to the issue of the child's physical condition adversely affecting his or her educational performance.* Additional consistency criteria used were that the state language must reflect a zero reject orientation, and that there can be no language in the definition which is obviously inconsistent with the spirit of P.L. 94-142, such as relating eligibility to a potential for learning.

Twenty-seven states defined their state policy under the broad category of physically impaired. It must be noted that in some instances, the subcategories of disabilities included speech and visual impairments. Five states (Illinois, Kentucky, Nevada, Rhode Island and South Carolina) further require a criterion of intellectual functioning in order for a child to be eligible under this category.

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*This criterion is especially important for definitions of orthopedically impaired and other health impaired, since a child in a wheelchair may not need a special education program but only access to a regular education program.

Under the definition of physically impaired, four states have addressed the issue of pregnancy, and in Connecticut, Florida, Maine and Tennessee they are included.

Further policy analyses indicates that currently only ten states (Table 9) have separate definitions for both orthopedically handicapped and other health impaired.

Table 8

State Policy Use of the Terms
Orthopedically Handicapped and Other Health Impaired

States Using Orthopedically Handicapped		States Using Other Health Impaired
AL	NB	AK
AK	NJ	DC
AZ	NY	ID
AR	ND	IL
DC	OH	MI
HI	OK	NJ
ID	SC	NY
IL	TN	ND
MI	WA	TN
MT		WA

It should be noted that the following states do not have policy regarding this category: Louisiana, Massachusetts, Minnesota, South Dakota, Vermont, West Virginia and Wyoming.

MULTIHANDICAPPED

Public Law 94-142 defines multihandicapped as follows:

> "Multihandicapped" means concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children (121a.5(b)(5)).

A review of current state policy reveals three main factors for determining child eligibility under this definition. The first is concomitant impairments, which means that the definition used does not delimit which specific types of impairments or combinations are to be included. It appears that any impairment or combination of impairments may be included. The second factor is that the combination of impairments ought to cause such severe educational problems that they cannot be accommodated in special education programs solely for a single impairment. The third factor is considered exclusionary in that the term multihandicapped does not include deaf-blind children.

In order for state policy to be judged consistent as indicated in Chart VII, these criteria must be present. First, the same or similar language as the corresponding definition in the P.L. 94-142 regulations must be used. This means that the state's definition must include at least the first two of the three factors discussed above. Secondly, if the language is not the same, the thrust of the definition may be considered to be consistent with P.L. 94-142 if it is based on the child's ability to perform educational tasks. The P.L. 94-142 definitions are based upon handicapping conditions adversely affecting the child's educational performance resulting in the premise that a handicapping condition requiring special education does not exist unless there is adverse educational performance. Finally, there is no language in the definition which is inconsistent with the spirit of P.L. 94-142, such as relating eligibility to a potential for learning.

Further analysis of state policy indicates that two noticeable additional eligibility criteria for the category of multihandicapped are present. First, eight states specifically excluded deaf-blind from the category of multihandicapped, and second, eleven states do not have a definition of multihandicapped. Table 10 depicts the appropriate states, indicating the policy definitions in use.

Table 9

State Definitions of Multihandicapped Excluding Deaf-Blind,
States With No Definitions of Multihandicapped
And States With a Separate Deaf-Blind Definition

States Having a Multihandicapped Definition Excluding Deaf-Blind	States With a Separate Deaf-Blind Category	States With No Multihandicapped Category
AR	AL	FL
AZ	DC	IA
GA	KS	LA
KY	KY	MA
ME	MS	MN
NM	SC	NH
RI	UT	OK
TN		OR
		SD
		WV
		WY

DEAF-BLIND

Public Law 94-142 defines deaf-blind as follows:

> "Deaf-blind" means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind children (121a.5(b)(2)).

The review of state policy indicated that 42 states include the deaf-blind within the category multihandicapped children. In seven states as displayed in Table 10 separate definitions for deaf-blind are used. Generally, it was found that two main definitional factors are used to determine child eligibility in this category. The first is concomitant hearing and visual impairments and the second is that the combination of the impairments is such that the child cannot be accommodated in a special education program solely for deaf or blind children.

Once again, the same criteria, as previously indicated for considering the consistency of state policy with P.L. 94-142 as indicated in Chart VII were used. These include, first, that the same or similar language as the corresponding definition in the P.L. 94-142 regulations; second, that if the language is not the same, the thrust of the definition may be considered to be consistent with P.L. 94-142 if it is based on the child's ability to perform educational tasks; third, that the language must reflect a zero reject orientation; and finally, that there can be no language in the definition which is obviously inconsistent with the spirit of P.L. 94-142, such as relating eligibility to a potential for learning.

IDENTIFICATION

The first step in assuring the provision of an appropriate publicly supported education program for all handicapped children is for the children to be identified. Public Law 94-142 specifically requires that every state must establish the policies and procedures which the state will undertake or has undertaken to insure that:

> (1) All children who are handicapped, regardless of the severity of their handicap, and who are in need of special education and related services are identified, located, and evaluated; (Sec. 121a.128).

Thus, states participating in the P.L. 94-142 program are mandated to develop procedures resulting in the identification of all children who may be handicapped, regardless of type or severity of handicap.

For purposes of this project, the term "identification" has been limited to those activities which lead to the recognition that a given child has or may have a handicapping condition. Identification is the entry step in which the child first comes to the attention of professionals responsible for assuring that the child is then channeled toward an appropriate evaluation, placement and instruction. Identification itself does not include either evaluation or placement.

As shown in Table 11, 24 states were determined to have policy provisions which required the identification of handicapped children as required by P.L. 94-142. In two of these states, Illinois and Vermont, children in private and parochial schools and institutions are specifically included.

Table 10

State Policy Requiring Identification of Children
In Need of Special Education

States with Policy Containing Such a Statement		States Without Such a Provision in Policy	
AR	NJ	AL	ME
AZ	NY	AZ	MI
CO	OH	CA	MO
CT	PA	DC	NC
HI	RI	DE	ND
ID	SD	FL	NH
IL	UT	GA	NM
LA	VT	IA	NV
MN	VA	IN	OK
MS	WA	KS	OR
MT	WV	KY	SC
NB	WY	MA	TN
		MD	TX
			WI
Total (24)		Total (26 + DC)	

Review of the identification policies in the states in the specific area of determining served and unserved handicapped children indicated that in 34 states more than one method, as listed in Table 12, is used to make this determination.

Table 11

States in Which Multiple Methods Are Indicated in State Policy to Determine Served and Unserved Children

Method Identified in State Policy Analysis	States with Policy Provisions Specifying the Identified Method	Total
Census of handicapped individuals	AL CA CT DE ID IL IA KY MD MA MN MO MT NB NJ NM ND RI SC SD TN UT VA	24
Interagency review of case records	AL AR FL VA	4
Registry of handicapped individuals	IA ND NY WA	4
Attending physician's report	CA	1
Child Find	AR AZ DE IL KS LA MA MN MS TN WV	11
Screening	AL AR AZ CA CT DE FL GA IL IN IA KS KY ME MD MA MN MS MO MT NB NV NJ NY NC ND OK PA SC TX VA WA WV WI	34
Referral	AR AZ CO CT DC DE GA HA ID IL IN IA ME MA MI MN MS MT NB NJ NM NY NC ND PA RI SD TX VA WA WV WI	32

While, as indicated, the majority of states use multiple methods for carrying out this determination, ten states, as listed in Table 13, use a single method. Also presented in Table 13 are the seven states in which there is no indication of the use of any method.

Table 12

States in Which No Method or a Single Method for Determining Served and Unserved Children Is Indicated in State Policy

No Method Specified	Single Method Specified
AK NH OH OR UT VT WY	CO DC HI LA MI NV ND OK VA WA

EVALUATION

Seven major provisions of P.L. 94-142 regarding evaluation were examined in state policy in this study. In general, the specific provisions regarding the selection and administration of tests and other evaluation materials as required by P.L. 94-142 were less likely to appear in state policy than provisions for multi-faceted procedures. In two states -- Pennsylvania and Vermont -- the policies were very similar to P.L. 94-142 with respect to the selection and use of evaluation materials, while policy in 38 states contained language requiring multi-faceted assessments, multi-disciplinary evaluations, or prohibited the use of a single procedure as the sole criterion for determining an appropriate educational program for a handicapped child. The state policy findings for each of the six provisions which state and local educational agencies must insure are discussed below and displayed in Table 15.

> Tests and other evaluation materials: Are provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so (Sec. 121a.532(a)(1)).

The state policy review indicated that 30 states met this requirement with policy provisions which clearly required the use of non-discriminatory testing procedures.

"Tests and other evaluation materials have been validated for the specific purpose for which they are used" (Sec. 121a.532(a)(2)). This item was addressed in the policies of five states. Michigan, Pennsylvania, and Vermont policy contained statements that spoke directly to this requirement. Arkansas and New Mexico policy contained detailed regulations specifying by name the particular tests and evaluation materials to be used for a range of assessment purposes relating to various handicapping conditions.

> Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those which are designed to provide a single general intelligence quotient (Sec. 121a.532(b)).

In contrast to the requirement which prohibits use of a single procedure as the sole criterion for placement, this requirement is limited to the assessment of a child and does not concern itself with placement. Only Pennsylvania and Vermont appear to have policies specifically addressing this requirement.

> Tests are selected and administered so as best to ensure that when a test is administered to a child with impaired sensory, manual, or speaking skills, the test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure, rather than reflecting the child's impaired sensory, manual, or speaking skills (except where those skills are the factors which the test purports to measure) (Sec. 121a.532(c)).

The policies of the five states of Illinois, Iowa, Kansas, Pennsylvania and Vermont contain provisions which require this consideration of the child's handicap in selecting and administering diagnostic instruments.

"No single procedure is used as the sole criterion for determining an appropriate educational program for a child" (Sec. 121a.532(d)). This requirement is reflected in the policy provisions of 17 states, as shown in Table 15.

> The child is assessed in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities (Sec. 121a.532(f)).

In the state policy review a multi-faceted evaluation was defined to include, but not be limited to, a collection (more than one) of psychological, medical, educational and other diagnoses, assessments, and recommendations required for a child suspected of being handicapped and in need of special education and related services. The requirement of multi-faceted assessments was reflected in state policy in two ways, as shown in Table 15. Twenty-nine states provide a multi-faceted evaluation for all children with a suspected handicapping condition, while seven states provide a multi-faceted evaluation for specified categories of children depending on the suspected disability. Maine and Rhode Island policy fall in both categories. The states listed on Table 14 possess policy that provides that a single specialist will certify a child for program eligibility, or that only one type of assessment is required to determine program eligibility or recommended, but did not require, multi-faceted assessments.

Table 13

States With Evaluation Policy
Providing for Single Specialist Certification
And Single Type Assessment

CT	MD
DE	MO
FL	NB
IA	NV
IN	OK
KY	OR

> The evaluation is made by a multi-disciplinary team or group of persons, including at least one teacher or other specialist with knowledge in the area of suspected disability (Sec. 121a.532(e)).

This requirement is subdivided into two items in Table 15. The policy in 21 states requires evaluation by a multi-disciplinary team which for the purposes of this study, is defined as consisting of at least two persons

from different disciplines. Of these, 15 states require "at least one teacher or other specialist with knowledge in the area of suspected disability" be included as a member of the team.

Table 14

Summary of State Policy Regarding Evaluation

P.L. 94-142	States with Provisions in Their Laws or Regulations Which Appear Similar to P.L. 94-142	Total States
Tests and Other Evaluation Materials		
Are provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so;	AK AZ AR CA CO DE GA ID IL IA KS LA MA MI MN MT NV NM NC OR PA RI SD TX UT VT VA WA WV WY	30
Have been validated for the specific purpose for which they are used;	AR MI NM PA VT	5
Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those which are designed to provide a single general intelligence quotient;	PA VT	2
Tests are selected and administered so as best to ensure that when a test is administered to a child with impaired sensory, manual, or speaking skills, the test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure, rather than reflecting the child's impaired sensory, manual, or speaking skills (except where those skills are the factors which the test purports to measure);	IL IA KS PA VT	5
No Single Procedure		
No single procedure is used as the sole criterion for determining an appropriate educational program for a child;	AZ AK CA GA HA KS MA MN MS MT ND OH SC TN VT WA WV	17

Table 14 - Cont'd

P.L. 94-142	States with Provisions in Their Laws or Regulations Which Appear Similar to P.L. 94-142	Total States
Multi-Faceted Assessments		
For handicapped children generally;	AL AK AZ AR CA CO GA ID IL KS MA ME MN MS MT NH NJ NM NY NC PA RI TX UT VT VA WA WV WY	29
For certain handicapped children depending on the suspected disability;	IN KY ME MI OH OR RI	7
Personnel		
The evaluation is made by a multi-disciplinary team or group of persons;	AK AR CA HA ID LA ME MA MI MN MS MT NC PA RI SD UT VT WA WI WY	21
Including at least one teacher or other specialist with knowledge in the area of suspected disability;	AK AR CA HA MA MN MS MT NJ PA RI UT VT WA NC	15

PLACEMENT

Through the evaluation process, children suspected of needing special educational services are assessed. At the conclusion of the process, the education agency determines whether or not the child has a special education need and if so, determines the educational setting or placement in which the program will be provided. P.L. 94-142 requires that when a determination is made that a child is handicapped and in need of special education, an individualized education program (IEP) be designed regarding the specific nature of the education and related services that will be provided to the child. Other requirements regarding the specific procedures for developing an individualized education program are also contained in the Act. Table 16 reflects the major provisions of the law regarding the process of IEP development in determining appropriate placement and lists the states which include similar provision in their state policy.

First is the requirement that a written individualized education program shall be developed for each handicapped child. The review conducted for this project examined state policy regarding this provision from the perspective that when a child requires special education, the special education program will be individually designed for that child so as to be appropriate to his or her special needs. The policy in 33 states, as indicated in Table 16, contained such provisions.

"Placement decisions must be made by a group of persons, including persons knowledgeable about the child, the meaning of the evaluation data, and the placement options" (Sec. 121a.533(a)(3)). In reviewing state policy, 33 states were determined to require that placement decisions be made by a group. Typically, state policy required a placement team consisting of two or more disciplines with other specialists added to the team as necessary or as required by state regulations.

The following persons are specifically required by P.L. 94-142 to be included as participants in "a meeting to develop an IEP" for a handicapped child:

> (1) A representative of the public agency, other than the child's teacher, who is qualified to provide, or supervise the provision of, special education.
>
> (2) The child's teacher.
>
> (3) One or both of the child's parents....
>
> (4) The child, where appropriate.
>
> (5) Other individuals at the discretion of the parent or agency (Sec. 121a.344(a)).

Evaluation personnel. For a handicapped child who has been evaluated for the first time, the public agency shall insure:

(1) That a member of the evaluation team participates in the meeting; or

(2) That the representative of the public agency, the child's teacher, or some other person is present at the meeting, who is knowledgeable about the evaluation procedures used with the child and is familiar with the results of the evaluation (Sec. 121a.344(b)).

The required participants indicated in state policy are individually reflected in Table 16 because state provisions vary greatly. Policies in Kansas, Massachusetts, Minnesota, Pennsylvania, South Dakota, Utah, and West Virginia specify all of the participants required by P.L. 94-142. The policies in 30 states indicate that administrators and evaluators are the most frequent decision makers. Provisions for the inclusion of parents occur in 17 states, teachers in 15 states and the child in ten states.

"Handicapped children are to receive a free appropriate public education in the least restrictive educational environment" (Sec. 121a.550). The policy review indicated that 33 states possessed a policy statement directed to insure that educational programming for the handicapped child should occur with nonhandicapped children to the maximum extent appropriate.

"Each handicapped child's program is to be reviewed at least annually" (Sec. 121a.346 (e)). The policies in 34 states contained provisions requiring that at least an annual examination of one or more of the following items occur: whether the child has achieved the goals set forth in the individualized education program; whether the child has met the criteria which indicate readiness to enter a less restrictive program; whether the program the child is in should be specifically modified to render it more suitable to the child's needs.

"Each handicapped child is to be re-evaluated at least every three years" (Sec. 121a.534(b)). The review revealed that the policy of 19 states contained this provision.

Table 15

Summary of State Policy Regarding Placement

P.L. 94-142	States with Provisions in Their Laws or Regulations Which Appear To Be Consistent with Those of P.L. 94-142	Total States
Individualized Education Program Development Required	AR CA CT DE GA HA ID IL KS LA ME MD MA MN MT NV NH NJ NY ND OR PA RI SD TN TX UT VA VT WA WV WI WY	33
Participants		
A multidisciplinary group of persons	AK AL AR AZ CA CO GA HA ID IL IN KS MA MD MI MN MS MT NC ND NJ NM PA RI SD TN TX UT VA WA WV WI WY	33

P.L. 94-142	States with Provisions in Their Laws or Regulations Which Appear To Be Consistent with Those of P.L. 94-142	Total States
Administrator/supervisor	AK AR AZ CA CO CT DC DE GA HA ID IL IN KS KY LA MA MI MN MS MT ND PA RI SD TX UT VT WV WY	30
Child's teacher	AK AZ GA HA ID KS MA MN ND PA RI SD UT VT WV	15
Child (where appropriate)	AR KS MA MN PA SD TN UT VT WV	10
Parent	AR AZ CA DC KS KY MA MI MN MS PA RI SD TN UT VT WV	17
Evaluator or person knowledgeable about evaluation	AK AR AZ CO DE GA HA IL IN KS MA MI MN MT NB ND NJ NM NV PA RI SD TN TX UT WV WI WY	28
Other individuals	AK AR CA CO CT DE FL GA HA IN KS KY MA MI MN MS MT NJ NM NC ND PA SC SD TN TX UT VT W[illegible] WY	30
Least restrictive environment provision	AK AZ AR CA CO CT GA HA IL IN IA KS LA ME MD MA MN MS MO MT NJ NC ND PA RI SD TN UT VT WA WV WI WY	33
Annual review	AK AL AR AZ CA CO DE GA HA IA ID IL KS KY LA ME MA MI MN MS MT NB NV NC ND NM OR PA TX UT VT VA WV WY	34
Re-evaluation at least every three years	AL GA ID KS LA MA MN MO NH NC ND RI SD TX UT VA WV WI WY	19

AGE OF ELIGIBILITY

P.L. 94-142 requires that states establish "a goal of providing full educational opportunity to all handicapped children" (Sec. 612 (2)(A)(i)) and assure,

> ... a free appropriate public education will be available for all handicapped children between the ages of three and eighteen within the state not later than September 1, 1978, and for all handicapped children between the ages of three and twenty-one within the state not later than September 1, 1980, except that, with respect to handicapped children aged three to five and aged eighteen to twenty-one, inclusive, the requirements of this clause shall not be applied in any state if the application of such requirements would be inconsistent with state law or practice, or the order of any court, respecting public education within such age groups in the state" (Sec. 612(2)(B).

Considerable variation was found in reviewing state policy with respect to the ages that handicapped children were considered eligible for special education and related services. Four primary areas were examined including the relationship between existing state policy for age of eligibility and the P.L. 94-142 requirements, the use of policies that promote an earlier age of eligibility for children with specific handicapping conditions or delays eligibility for those children, and finally, states policy terminating eligibility with high school graduation.

Table 17 presents eligibility ages in state policy using the P.L. 94-142 requirements as the reference point. As shown, seven states, Iowa, Kansas, Kentucky, Michigan, Mississippi, New Hampshire, North Carolina and Ohio, currently mandate full educational opportunity for handicapped children between the ages of zero and 21. The policy in 22 other states appears consistent with the P.L. 94-142 age mandate in that children aged five to 18 are specified in their policies.

An additional 20 states have policy requirements for age of eligibility which appear to be less than that required by P.L. 94-142. Six of these states, Alabama, Arkansas, New Mexico, South Carolina, Washington and Wyoming, provide education for handicapped children from age six in their policy requirements. Two states have specific policy provisions terminating eligibility at age 17 (Vermont) or age 18 (Indiana). Of concern as well are those states where permissive policies are used.

Finally, the policy in eight states appears to exceed the age maximum requirement of twenty-one years as provided in P.L. 94-142. Of these, only West Virginia has a comprehensive policy mandate which exceeds age 21. The policy language in six states is permissive rather than mandatory but could allow the eligibility to exceed age 21. These states include Florida, Massachusetts, Michigan, Nebraska (for deaf/blind only), New Jersey and Utah. Oklahoma provides homebound instruction for students between ages six and 26.

Table 16

Summary of State Policy Age Requirements
for the Education of Handicapped Children

States with Age Requirements Similar to P.L. 94-142		States with Age Requirements Other Than Those of P.L. 94-142
Full Educational Opportunity Ages 0 - 21	Minimum Ages 5-18	
IA	AK NV	AL (6-21)
KS	AZ NJ	AR (6-21)
MI	CO OK	CA
MS	CT RI	DE (permissive)
NH	IL SD	FL (permissive from 3 up)
NC	LA TN	GA (same age as general ed.)
OH	ME TX	HI (permissive 0-5)
Total (7)	MA UT	ID (hearing and vision 6-21)
	MN VA	IN (6-18)
	MO WV	MD (permissive)
	NB WI	MA (permissive to 25)
	Total (22)	MI (permissive to 25)
		MT (no overall age)
		NB (deaf/blind permissive over 20)
		NM (6-21)
		NJ (permissive over 20)
		NY (permissive 3-5)
		ND (permissive 5-21)
		OK (homebound 6-20)
		OR (mental retardation 6-21)
		PA (permissive under 6)
		SC (6-21)
		UT (permissive over 21)
		VT (6-17)
		WV (5-23)
		WA (6-21)
		WY

Sixteen states use policy which allow children with selected handicaps to be served earlier than others. As shown in Table 18 children who are hearing impaired or are deaf/blind are most frequently provided earlier eligibility in state policy than children with other handicaps. Eleven states have such policy for the hearing impaired and deaf/blind. Five states have provisions for children with visual impairments to start school earlier, while two states favor children with speech impairments, and Georgia provides early eligibility to children who are mentally retarded, orthopedically handicapped or severely disturbed. A non-categorical approach to early eligibility was found in the policy of four states, Arkansas, Hawaii, Indian and Louisiana. As indicated in Table 18, these states provide early educational opportunity to children whose handicap is so severe as to necessitate early intervention or whose handicap could be compounded if untreated.

Table 17

States with Provisions for Earlier Age
Eligibility for Selected Categories of Handicaps

Deaf, Hard of Hearing Deaf/Blind	MR	Ortho and Other Health	SED	Speech	Vision	Other
CT	GA	GA	GA	AL	AL	AR
DE				ME (P)	DE (P)	HI
FL (P)					MT	IN
IN (P)					NV	LA
MT					OK	
NB (P)						
NV						
ND						
OK						
SC						
TN						
Total (11)						

P = Permissive eligibility
Other = Children whose handicap is so severe as to necessitate early education intervention and whose handicap could be compounded if untreated.

In contrast to early eligibility provisions is policy that delays eligibility. Such policy was found in the policy of Idaho, Oklahoma and Oregon, where delays were applied to children with selected handicaps. Especially noticeable is the Oregon policy which provides the right to education to handicapped children ages zero to 21, except the mentally retarded who are eligible from age six.

Table 18

States with Policies Delaying Age Elibility
for Selected Categories

Idaho (vision and hearing 6 - 21, all others 5 - 21)

Oklahoma (homebound 6 - 26, all others 4 - 21)

Oregon (mental retardation 6 - 21, all others 0 - 21)

The final finding with respect to age policies concerns the effect of high school graduation on the handicapped student's eligibility. Seven states, as indicated in Table 20, terminate the student's eligibility for special education and related services at high school graduation, if this occurs before the maximum eligibility age permitted by state law. Since all of these states have policy provisions for education at least up to age 21 (Massachusetts is permissive through age 25), an earlier graduation would make a difference in the years of education required to be provided.

Table 19

States with Policies that Terminate Eligibility at High School Graduation

State	Maximum Age Otherwise Permitted
CT	21
MA	Permissive to 25
MO	21
NH	21
NJ	Permissive to 20
RI	21
SD	21

SEVERITY

The search of state policy indicated that specific consideration of severity of handicapping condition was rarely present. One notable exception, however, is the definitions of handicapped children used in South Dakota regulations. This policy creates two categories of handicap as follows:

> Children in need of special assistance, those children who are mildly to moderately handicapped, or gifted, who cannot achieve to their expected potential in the regular school environment without special education.
>
> Children in need of prolonged assistance, those children who are severely to profoundly handicapped and cannot achieve to their expected potential in the regular school environment without special education.

These categories are the same as those recommended by Hobbs (1975) in a major classification project more fully described in the literature review that is also part of this report. Iowa and Idaho policy establish a separate category for the severely handicapped which cuts across the traditional categorical labels.

Despite the frequent discussion of establishing generic categories of handicapped children and particularly those with "mild" needs, state policy continues to group children according to the traditional categorical labels. Massachusetts presents one type of exception with its non-categorical policy including all handicapped children in need of special education.

In the category of hearing impaired, states distinguish between the deaf and the hard of hearing or between total and partial loss of hearing. This approach taken in policy appears to reflect a medical model with states using audiological criteria primarily to determine the severity of the hearing handicap.

A similar approach is found in the category of visually impaired. The severity of the visual impairment, with the exception of distinguishing total loss or blindness, is not addressed in state policy.

In the classification of seriously emotionally disturbed, few states specified in their policy criteria which indicated level of severity. However, 29 states did require that the disturbed behavior be manifested over a long period of time and to a marked degree.

With regard to mental retardation, three approaches are used to quantify the severity of retardation; the use of the intelligence quotient, standard deviation or specified fraction of normal rate of development of functioning. Stratification of retardation into subcategories appears in the policy of 37 states. However, to be noted is the omission of the severely retarded subcategory in the educational policy of 32 states as previously discussed.

Section III

LITERATURE REVIEW

Mental Retardation

Summary of the Literature Review

The review of the literature pertaining to the mentally retarded indicated that the Public Law 94-142 regulatory definition is a variation of the most commonly accepted definition of mental retardation used in the field, patterned after that developed by the American Association on Mental Deficiency (AAMD). Additional summary findings are that problems of assessment of intellectual functioning of mentally retarded children center primarily on an absence of validity for young children and the continued presence of culture bias for children from various minority groups. It was also found that there is a serious need for objective and standardized measures of adaptive behavior in order to define "adaptive behavior." Despite the extensive literature indicating that mental retardation consists of two qualitatively and quantitatively distinct conditions as the result of organic versus familial-cultural origins, emphasis was placed upon evaluation using a many faceted assessment with emphasis on instructional needs rather than on process deficits. It was also felt that such an approach could alleviate culture bias. Recommendations were made for use of a continuum of placement options which offer a high degree of mobility and contact between special and regular programs. Finally, the literature was conclusive in supporting that the mentally retarded are a highly heterogeneous population, dictating the need for individual as opposed to group designed instruction.

Definitions

A main source of controversy concerning the ethics of diagnostic labeling and classification has been found in the field of mental retardation. The effects of the label *mentally retarded* on a child in a culture that values intellectual ability are described in the literature as mixed. Special educators are aware that with proper intervention these children can usually become productive contributing members of society. But to receive the special services needed they must be identified, evaluated, and provided services which have traditionally involved a categorical label. Public Law 94-142 includes this category and defines it in regulations as follows:

> "Mentally retarded" means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance. [121a.5(b)(4)]

This definition is an exact quote from a definition developed by Grossman for the American Association on Mental Deficiency in the 1973 *Manual on Terminology and Classification* with the exception of the added clause "which adversely affects a child's educational performance." It is the AAMD definition that is most widely used for

educational purposes. Although the definition itself is succinct, it cannot be discussed apart from the AAMD definitions of the key words used in the 1973 *Manual*:

> MENTAL RETARDATION . . . denotes a level of behavioral performance without reference to etiology. Thus, it does not distinguish between retardation associated with psychosocial or polygenic influences and retardation associated with biological deficit. Mental retardation is descriptive of current behavior and does not imply prognosis. Prognosis is related more to such factors as associated conditions, motivation, treatment and training opportunities than to mental retardation itself.
>
> INTELLECTUAL FUNCTIONING may be assessed by one or more of the standardized tests developed for that purpose; SIGNIFICANTLY SUBAVERAGE refers to performance which is more than two standard deviations from the mean or average of the tests. On the two most frequently used tests of intelligence, Stanford-Binet and Wechsler, this represents IQ's of 67 and 69, respectively. (It is emphasized that despite current practice a finding of low IQ is never by itself sufficient to make the diagnosis of mental retardation.)
>
> The upper age limit of the DEVELOPMENTAL PERIOD is placed at 18 years. . . .
>
> ADAPTIVE BEHAVIOR is defined as the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age and cultural group. Since these expectations vary for different age groups, DEFICITS IN ADAPTIVE BEHAVIOR will vary at different ages. . . .

The above definitions are critical to understanding the original intentions of the AAMD definition of mental retardation. For purposes of this review it was assumed that because Public Law 94-142 uses wording almost identical to the AAMD definition, AAMD's further definitions of the key words were also intended. It should be noted that this definition does not refer to either etiology or prognosis. Only persons who meet the criteria including deficits in both intellectual functioning and adaptive behavior are to be considered retarded. Both areas are to be considered with equal weight in making a diagnosis. Intellectual functioning is to be determined by one or more of the standardized tests developed for this assessment purpose. In order to be considered mentally retarded a child must score two or more standard deviations from the mean or average on such tests. In addition, the child must show deficits in adaptive behavior. This will vary for different age groups. According to the still-to-be-published revision of the manual (Grossman, in press), an interpretation of IQ test score numbers is to be tempered with professional judgment. Testing of intelligence and adaptive behavior is always to be done in a culturally fair manner.

Robinson and Robinson (1977) point out that the AAMD approach differs in a number of dimensions from previously used definitions:

1. The retarded person is judged in terms of his success with the developmental tasks appropriate for his age.
2. This definition makes clear that a designation of mental status should be a description of present behavior and should implicitly disavow the notion of potential intelligence.
3. The AAMD definition is couched in terms of measurement.
4. A further characteristic of the AAMD definition is that it avoids specific differentiation of mental retardation from other childhood disorders such as childhood schizophrenia or brain damage.
5. The definition, despite its statistical orientation, also exhibits characteristics of the pathological model. . . . The definition is basically oriented toward defects of deficits in the person, rather than toward his social role or status, or toward characteristics of the environment with which he must cope.
6. The most significant change in the 1973 as compared with the 1959 definition is the return to a more traditional cutoff score, two standard deviations below the mean.

The basic components of the definition--"significantly subaverage intellectual functioning" and "deficits in adaptive behavior"--are frequently discussed in the literature, as described below.

Intellectual Functioning

Ever since the original work of Binet and Simon in developing intelligence tests, these tests have had as a primary purpose the identification of the mentally retarded. The underlying principle of these tests (Filler et al., 1975; Baumeister and Muma, 1975) was to measure the amount of a "unitary and physically unobservable entity," namely intelligence. Specifically, Baumeister and Muma (1975) point out that theoretical reliance upon intelligence as a unitary factor virtually eliminates some of the other theories of intellectual development:

> This is not to say that those theories of human behavior which rely heavily upon the construct of general ability (the timeless and ubiquitous "g" factor) are necessarily invalid. But we are persuaded that most domains of socially relevant behavior are highly integrated and dynamic systems--far richer, complex, and more diverse than is implied by a unitary psychometric conception of intelligence. One of our grounds for objecting both to the Grossman (1973) and the earlier Heber (1961) definitions is that they virtually exclude, as irrelevant to the definitional process (and everything that follows), other theories of human adaptation--factorial, developmental, or learning. We might remind ourselves that other major models of human intelligence and development have been formulated (e.g., Guilford, Piaget, Skinner, and Bruner) that are far more explicit and comprehensive in detailing the nature and course of complex behavior development.

Baumeister and Muma also explain that the IQ score is the result of many factors other than inherent intellectual capacity. These include learning, motivation, physiological and cultural variables, and such examiner characteristics as perceptual set, ethnicity, race, sex, socioeconomic background, and language or dialect. "In short," they say, "an IQ score is a complex product of a myriad of intra- and interpersonal variables. It is essentially a predictor, not an entity."

The IQ's effectiveness as a predictor has been summarized by Matarazzo (1972) who reports correlations between .50 and .70 for the ability of IQ to predict educational attainment (in years) and academic success (overall grade point) but only a correlation of .20 to .40 in ability to predict success on the job or socioeconomic status. The literature indicated that the IQ appears to be the most reliable single predictor of academic achievement of large groups, yet its use, even for this purpose, with individuals is suspect (Haywood et al., 1975; McClelland, 1973; Haywood, 1971). Matarazzo (1972) points out the weaknesses of the IQ for individual diagnosis and prediction: "The IQ test cannot, or at least should not, be used to 'diagnose' anything. Moreover, the predictive power implicitly attributed to completely arbitrary cutoff points simply does not exist at the individual level primarily because of numerous sources of error, both in terms of reliability and validity." In contrast with this majority view in the literature, Clausen (1973) would prefer to use IQ alone to define mental retardation, claiming that the IQ is the best alternative at the present time and is certainly more valid than any measure of adaptive behavior.

A major and well-known criticism found in the literature concerns the use of intelligence testing as a measure of intellectual functioning with minority children. This topic is fully discussed later in this chapter and also in the evaluation chapter.

There is agreement that the use of the IQ as the major determiner of placement in special classes for the mentally retarded, particularly the mildly mentally retarded, results in a disproportionate number of disadvantaged or culturally different children in these programs (Mercer, 1973; Robinson and Robinson, 1977; Haywood et al., 1975).

Adaptive Behavior

The importance of daily functioning as a measure of mental retardation has long been recognized. Tredgold (1937) offered a definition of mental retardation which stressed "that the individual is incapable of adapting himself to the normal environment of his fellows in such a way as to maintain existence independently of supervision, control, or external support." Doll (1941) identifies "social incompetence" as the first of six criteria for mental retardation. Kanner (1957) related the degree of handicap to the complexity of the particular environment. Kanner also separated the mentally retarded into two groups, one "so markedly deficient . . . that they would stand out as defectives in any existing culture. . . . They would be equally helpless and ill adapted in a society of savants and in a society of savages." The

second type of retardation was related to cultural demands, as he says, "The other type is made up of individuals whose limitations are definitely related to the standards of the particular culture which surrounds them. In less complex, less intellectually centered societies they would have no trouble in attaining and retaining equality of realizable ambitions." The importance of the subculture in determining relative retardation was shown in a study by McCartin (1966) in which 83% of the children with IQ's below 85 in middle-class schools were nominated by their teachers as "slow learners," while only 44% of these low scorers were nominated in schools serving minority and disadvantaged students. Thus, with the AAMD definition of adaptive behavior, which relates functioning to the cultural group, a child with a low IQ in a middle-class school would also be more likely to appear to have "defects in adaptive behavior" than that same child in a class of children most of whom have a lower level of educational functioning.

The AAMD *Manual* requires that the cutoff point of adaptive behavior deficits be set at two standard deviations below the mean. However, as Filler (1975) points out, "This change is hardly worth noting because even now no suitable norms exist which would allow for the determination of negative deviation. . . . Unfortunately, clinical opinion remains the major factor in the determination of levels of adaptive behavior."

The definition of adaptive behavior is open to as much discussion in the literature as that of "mental retardation." An alternative definition based on the concept of "coping" has been offered by Leland and colleagues (1968) as part of the Adaptive Behavior Project sponsored by the National Institute of Mental Health:

> Adaptive behavior refers primarily to the manner in which the individual copes and . . . therefore, "an impairment in adaptive behavior" would imply unsuccessful or incomplete coping. This concept of "coping" is represented by three major facets:
>
> 1. *Independent functioning* . . . the ability of the individual to successfully accomplish those tasks or activities demanded of him by the general community and in terms of the typical expectations for specific ages.
> 2. *Personal responsibility* . . . both the willingness of the individual to accomplish those critical tasks he is able to accomplish . . . and his ability to assume individual responsibility for his personal behavior. This ability is reflected in decision-making and choice of behaviors.
> 3. *Social responsibility* . . . the ability of the individual to accept responsibility as a member of a community group . . . reflected in levels of conformity, socially positive creativity, social adjustment, and emotional maturity . . . some level of civic responsibility leading to complete or partial economic independence (Leland, Nihara, Foster, Shellhaas, and Kagin, 1968, p. 14).

Robinson and Robinson (1977) report another route to determining the nature of "adaptive behavior" through the analysis of behaviors tapped by existing scales designed to assess adaptation. The obvious circular nature of this process (similar to defining "intelligence" as "what intelligence tests test") is thought to allow for the emergence of a hidden consensus. These authors also distinguish between two major types of adaptive behavior measures, those based on the concept of social maturity, a developmental phenomenon, versus attempts to provide an inventory of skills and responsibilities in several domains. Inventory scales are judged (by Robinson and Robinson) to be much more popular due primarily to the greater ease of standardization. They indicate that:

> An age scale must be standardized on a normal population, and a decent sampling of Ss in as diverse a country as the United States is an expensive proposition. Most inventory scales have settled for testing institutionalized retarded populations, severely limiting the interpretive possibilities and thereby foregoing the use of the scale to discriminate between normal and retarded individuals.

Pointed out is that the primary and more appropriate use of many of the adaptive behavior scales is not for identification of handicap but for diagnosis of specific behavioral deficits leading directly to remediation.

Correlations between measured intelligence and adaptive behavior have been investigated by various researchers (Leland et al., 1968; Johnson, 1970; Olechnowicz, 1973; Newman and Doby, 1973; and Ross and Boroskin, 1972). The results indicate that measures of adaptive behavior and intelligence have a moderate correlation over the range of retardation with the highest correlation occurring at the lower end of the scales.

The relative importance of the larger culture and subcultures as the normative basis for evaluating an individual's adaptive behavior has been considered by Mercer (1973), Baumeister and Muma (1975), and Clausen (1972). Baumeister and Muma state that the AAMD definition, though mentioning the obvious influence of cultural and social factors, is still primarily a person-oriented definition. They claim:

> It is presumptuous to set absolute or universal standards for adaptive behavior when a circumstance defines appropriateness. Crime, for example, may become adaptive for oppressed people.

Clausen (1972) does not deny the significance of adaptive behavior but argues against including it in any definition of mental deficiency:

> My position is that the concept's inclusion introduces an element of subjectivity which is detrimental to work in the field. It would seem that the development of measuring devices for adaptive behavior should have preceded the inclusion of adaptive behavior in the definition rather than vice versa.

Clausen's position, however, represents a minority view. Most authors (Leland, 1972; Mercer, 1973; MacMillan and Jones, 1972) stress the difficulties of measuring adaptive behavior but still see evaluation of adaptive behavior as an essential component of the identification/evaluation process.

Severity Factors

Criteria requiring that an individual manifest deficiencies in both adaptive behavior and intellectual functioning are also used to determine the levels of severity of mental retardation. These are usually divided into four segments: mild (educable), moderate (trainable), severe (dependent), and profound (life support). Grossman (1973) translates these segments into IQ values for the three most frequently used intelligence tests as follows:

LEVELS	OBTAINED INTELLIGENCE QUOTIENT	
	Stanford-Binet and Cattell	Wechsler Scales
	(s.d. 16)	(s.d. 15)
Mild	68-52	69-55
Moderate	51-36	54-40
Severe	35-20	39-25 (Extrapolated)
Profound	19 and below	24 and below (Extrapolated)

Severity levels of deficit in adaptive behavior that roughly correspond to the levels of intellectual functioning based on standard deviations are also provided by the AAMD *Manual*. The provision of services for the retarded has traditionally been based on severity levels, so that determination of severity level was critical to student placement once the determination of mental retardation was made. The differing identification and evaluation needs of the mildly versus the severely and profoundly retarded are discussed in the chapter on severity factors.

Three classification systems for mental retardation are currently in use in the United States: The U.S. Department of Health, Education, and Welfare's *International Classification of Diseases, Adapted for Use in the United States*, eighth edition (ICDA-8), (1967); the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, second edition (DSM-II), (1968); and the AAMD's sixth revision of the *Manual on Terminology and Classification in Mental Retardation* (Grossman, 1973). (Grossman's 1973 revision of the AAMD classification system is consistent with the ICDA-8 and DSM-II systems in the use of similar multiple criteria for the diagnosis of retardation and use of similar terminology for levels of severity.)

All three of these classification systems are essentially medical despite the AAMD definition, which does not refer to etiology. The 1973 AAMD *Manual* in which the definition is included also classifies mental retardation according to circumstances such as: (1) infections and intoxication, (2) trauma or physical agent, (3) disorders of metabolism or nutrition, (4) gross postnatal brain disease, (5) unknown prenatal influence, (6) chromosomal abnormality, (7) gestational disorders, (8) psychiatric disorder, (9) environmental influence, and (10) other conditions. Burton (1976) points out that categories (1) through (7) would generally be expected to represent circumstances attended by a level of retardation of trainable or below. He indicates that the remaining criteria would represent the educable level of retardation or severe behavioral disorders.

Two Group Classification System

A review of the current literature on mental retardation indicates accumulating evidence to support recognition of two subgroups of mental subnormality. Zigler (1966, 1967) isolates one type of mental subnormality as the result of predominantly organic defects. He describes the other type as the consequence of the interaction of familial with psychosocial factors. There appears to be some consistency between Zigler's two-classification system, the nine medical classifications represented in the AAMD *Manual* (Grossman, 1973), Zigler's system, and also Kanner's dichotomy based on absolute retardation or culturally relative retardation.

Organic deficiencies classified by the AAMD categories (1-7) generally represent a level of retardation of moderate through profound. Zigler has listed several distinctive traits in addition to the physiological or anatomical defect, including a tendency toward a lower degree of measurable intellectual ability (IQ less than 50), a higher incidence of other physical, sensory, or motor difficulties, poorer general health, less stamina, and noticeable stigmata. Difficulties with speech, motor coordination, and general frailty along with significantly subaverage intellectual development more often predispose the majority of this group to a dependent or sheltered status throughout their lives.

Zigler's familial subgroup represents the educable level of retardation. Zigler refers to this subgroup as "mentally retarded in contrast with mentally deficient (organic)," and is probably the larger of the two groups of mentally handicapped.

Alternative Definitions

Because Public Law 94-142 utilizes the AAMD definition with only a minor modification, this definition has been discussed at length. Various authors (Jordan, 1976; MacMillan, 1977; Robinson and Robinson, 1977), however, have reviewed various historical or different types of definition with terms such as *biological* (Ireland, 1900; Tredgold,

1908), *functional* (Yakovlev, 1961), *factorial* (Jastak, 1965), *psychometric* (Clausen, 1972), *epistemological* (Inhelder, 1968), *sociolegal* (Dunn, 1973), and *behavioral* (Bricker, 1970; Bijou, 1973). Mercer (1973) has proposed a totally different definition of mental retardation based on a "social systems perspective" and describes mental retardation as an "achieved social status in a social system and the role played by persons holding that status." Characteristics of this definition are:

- "Intelligence" is relative to the requirements of the particular social system.
- One can be "retarded" for some systems (e.g., school) and "normal" for others (e.g., family life).
- Retardation cannot be "undetected," since an individual is retarded only by virtue of being labeled as such in a particular setting.
- The number of people labeled retarded in an area is determined by the social structure of that area (i.e., what is expected of persons; how much, or how well, is difference tolerated?).

In keeping with this definition, Mercer (1975) has made recommendations regarding the principles of multicultural pluralistic assessment. Mercer's ideas on evaluation are further discussed in the chapter on evaluation.

Identification, Evaluation, and Placement

In total the literature indicates--as described above and noted by Zigler, Kanner, the AAMD classification system, and the British approach which employs the terms "subnormal" and "severely subnormal"--that there are two major categories of mental retardation, differing primarily in the severity of the condition and in relation to various causative factors. Despite the literature's emphasis upon classification systems themselves and etiology, it is increasingly suggested that determination of the presence of a severe as opposed to a mild handicap can be of more instructional purpose than determination of the mental retardation itself. What also must be recognized, however, even in attempting to identify these children are the potential negative effects of labeling, particularly in the absence of follow-up services, and finally in the basic difficulty in the identification of mildly mentally retarded children.

A frequently recurring error leading to the diagnosis of mental retardation involves the use of test scores obtained from young children. The literature (Lidz, 1977; Faris et al., 1976) consistently supports early identification and intervention for children who are severely retarded or whose intellectual impairment is accompanied by sensory impairments or orthopedic impairments. With appropriate educational intervention at early ages, preferably preschool, the severity of such handicapping conditions can be much less incapacitating.

However, those young children whose handicaps are mild are the subject of considerable professional disagreement.

Many early childhood programs for the mildly handicapped are intended to serve a preventative rather than a treatment function. Negative effects of premature labeling and their effect on parents and teachers must be balanced against the advantages of early intervention programs. Wolfensberger (1965) cautions that while:

> Early diagnosis is desirable when it leads to prevention, early treatment, or constructive counseling; it is irrelevant if it is purely academic and does not change the course of events; it is harmful if, in balance, child or family reap more disadvantages than benefits.

Adding to the controversy is the limited reliability of standardized intelligence instruments that are frequently used in the assessment of young children (Bayley, 1970; Lewis and McGurk, 1972). Despite the latest identification mandates, the literature noted that it is usual practice to identify only the severely retarded prior to school entrance (Hewett, 1977), while identification of the mildly retarded during the school years is usually the result of teacher referral due to poor classroom performance or low scores on group intelligence tests.

Beyond identification comes the question of evaluation of mentally retarded children in which controversy exists. A major issue in assessment of the mildly handicapped is the use of assessment techniques that don't penalize children from nonmajority cultures. The overrepresentation of black and other minority groups in classes for the mildly retarded or educable has been documented by Mercer (1975), Cleary (1968), and Thorndike (1971). Also at issue are continuance of traditional assessment activities that have involved the use of a battery of tests in the areas of intelligence, perception, and personality given by a school psychologist in terms of the relevance of the results for instructional purposes (Filler, et al., 1975; Kamil and Elliot, 1971). These authors argue for an evaluation based on determining instructional needs--if the child is having trouble with reading, then it is necessary to assess exactly what it is the child can and cannot do. It is further argued that knowing that the child cannot decode consonant blends or subtract small whole numbers is of more instructional value than knowing the child's IQ, the presence of a perceptual problem, or the child's socioeconomic status.

A second major evaluation issue with the mildly retarded centers upon nonbiased assessment. Among the authors who have spoken to this issue are Mercer (1973), Oakland (1977), Laosa (1977), Tucker (1977), Ginsburg (1972), Cleary et al. (1975), and Robinson and Robinson (1977). Mercer (1975) has recommended a multicultural pluralistic assessment procedure which considers the child's environment as much as the child himself:

> Multicultural pluralistic assessment includes identification of the socialization milieu in which the child is

> being reared, evaluation of the child's general academic readiness in relation to the general public school population and to his own sociocultural milieu, assessment of the child's adaptive behavior in nonacademic activities, an inventory of the child's health history, and screening for physical impairments. Information on the socialization milieu, the child's adaptive behavior, and the child's health history are secured in a structured interview with the mother or principal caretaker. Information on the child's general academic readiness and screening for physical impairments is secured during an assessment session with the child.

Tucker (1977) recommends an individual assessment/diagnostic process for the mildly handicapped that would include the following components: (1) observational data, (2) other data available (such as cumulative records), (3) language dominance, (4) educational assessment data, (5) sensory motor and/or psycholinguistic assessment data, (6) adaptive behavior data, (7) medical and/or developmental data, (8) personality assessment data, and (9) intellectual assessment data. Tucker feels that when all these data have been accumulated it is possible for assessment specialists to make fairly unbiased decisions regarding the child's educational needs. Mercer and Ysseldyke (1977) compare five diagnostic evaluation models, the medical, the social deviance, the psychoeducational process, the task analysis, and the pluralistic model and conclude that:

> Each of the five assessment models, viewed separately, provides only a partial view of the child. Attempts to develop a nondiscriminatory diagnostic-intervention program should consider using a multimodel approach in which the child is viewed simultaneously from all five perspectives.

The literature in the evaluation of the severely mentally retarded is less concerned with culture fairness and intellectual assessment and more concerned with assessment of adaptive behavior skills. The lack of standardized adaptive behavior scales has been referred to earlier. There seems to be little disagreement that assessment needs to be closely tied to instruction and detailed task analysis (Sailor and Haring, 1977). For further discussion of evaluation of the severely retarded see the chapter on severity factors.

When considering program placements for this population, the literature stressed recognition of the individuality of the children in this broad category and the full use of a variety of educational options (MacMillan, 1977; Deno, 1973). Specifically, MacMillan called for all placement decisions being based upon two principles including the principle of normalization or the least restrictive alternative, which means that the child should be placed in the administrative arrangement closest to the regular class to the degree that his own needs and characteristics will allow. MacMillan's second principle is that no one placement should be considered appropriate for a prolonged period of time but only in terms of the child's *present* needs

and characteristics, which means that periodic program review and child reevaluation must occur. MacMillan also indicated that administrative arrangements governing program operations should be as flexible as possible to allow meaningful integration of the child to occur in the regular education program.

Although of primarily historical value, studies on special classes versus regular class placement of educable mentally retarded (EMR) students have focused upon the apparent lack of efficacy of special classes in increasing their academic achievement (Dunn, 1968; Gegelka and Tyler, 1970; Kirk, 1964) and on peer acceptance of the retarded youngsters (MacMillan, 1977; Johnson, 1950). Critics of the studies in this area have also pointed to methodological weaknesses. Finally, both Reynolds and Birch (1977) and Vergason (1972) suggest that too much importance is ascribed to the administrative arrangement in the debate over special class versus regular class placement.

Deaf and Hard of Hearing

Summary of the Literature Review

A primary finding from the literature review is that greater emphasis must be placed by educators on the earliest possible identification and provision of programs to hearing impaired children. Discussion of this thrust was accompanied by comments that focused on the desirability of massive neonate screening programs especially for high-risk children, but with concern for the potential accusations that such programs may not be cost effective. Opinions were also presented that threshold audiological criteria for identification of preschool children especially should be lowered to between 10 and 20 decibels, that school age screening should be most frequent in the primary grades, and that the effects of hearing loss on communication and language abilities and skills are so subtle and critical that expert evaluators trained and experienced in assessing the functioning of the hearing impaired are essential.

Another major thread throughout the literature pertaining to definitions and criteria is that language ability is the critical element relating to the educational performance of deaf or hard of hearing children. Related is that while severity of hearing loss and severity of handicap are correlated, they are not synonomous. Finally, the emphasis placed on language skills was repeatedly mentioned in making individual decisions about the least restrictive placement of these children.

Definitions

Public Law 94-142, State policy, and the literature commonly separate the hearing impaired into two categories--the hard of hearing and the deaf. The Federal definitions of these categories are as follows:

> "Hard of hearing" means a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance but which is not included under the definition of "deaf" in this section.
>
> "Deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

In the literature Connor (1975) defines the deaf as "those individuals whose hearing loss is so severe at birth or during the prelingual period that it precludes the normal acquisition of language comprehension and expression." This definition focuses on the two critical areas, often emphasized in the literature, of language ability and age of onset. Medical and audiological terminology is conspicuously absent. The Connor definition of the partially hearing uses a parallel approach

and states that these individuals are "persons whose hearing loss, although significant in degree, was either acquired after the critical period for language acquisition, thus enabling the individual to develop some communicative skills, or does not totally impair oral language development." Again, language skills and age of onset are the critical elements. McConnell's (1973) definition also emphasizes age of onset as it affects language development. He defines deaf persons as: "those individuals who have such a severe hearing loss at birth and in the prelingual period (before 2 to 3 years of age) that language development does not occur."

The importance of age of onset is also stressed by the definition of The Committee on Nomenclature of Executives of American Schools for the Deaf which distinguishes two deaf populations as follows: "the congenitally deaf person born deaf whose sense of hearing is nonfunctional for the ordinary purposes of life and the adventitiously deaf person born with normal hearing acuity, but whose sense of hearing becomes nonfunctional later in life through accident or illness" (National Advisory Council, 1969). According to Avery (1975) and Goetzinger (1974), late hearing loss has less effect on communication skills because the maintenance of speech and language is less difficult than its original acquisition.

The definitions of "deaf" and "hard of hearing" themselves reflect consideration of the severity of hearing loss. A number of classification schemes have been developed (American National Standards Institute, 1969) which rely on four to six specific ranges of decibel loss. Goetzinger (1974) describes the hard of hearing as having hearing losses ranging from 25 to 70 decibels (mild, marked, and severe), while the educationally deaf have losses greater than 70 decibels. The problems of classification, including consideration of severity, among the hearing impaired are well described by Moores in the Third Review of Special Education (1976):

> Not only are the categories of "deaf" and "partially hearing" inadequate in any descriptive sense but so are some of the other categories which have been suggested. For example, using "mild," "moderate," "severe," and "profound" to describe hearing impairment implies homogeneity within groupings when in fact there is very little. The terms "educational," "social," or "occupational" deafness are equally heterogeneous. Consequently, what is needed in the taxonomy of deafness and hearing impairment is a multidimensional classification scheme which describes specific etiology, symptomology, performance capability in a variety of situations (including educational, social, and occupational), and deficits in all areas relative to normal development.

Of importance in this total view is that Gearhart and Weishahn (1976) stress that children with identical hearing losses may function quite differently in the classroom. Ross (1976), however, believes that degree of hearing loss remains the single best indicator of severity. Clearly, consideration of this question rests with the purpose of the classification system.

Identification, Evaluation, and Placement

Throughout the literature there is virtually total agreement regarding the importance of early identification and remediation of hearing handicaps. The close correlation between early hearing loss and severe deficits in communication skills has been well documented (Ling, 1972; Downs, 1976). Specifically early identification is intended to generate two essential outcomes: medical or audiological treatment (such as curing otitis media or fitting the young child with a hearing aid) and involvement of the child in an enriched language environment with oral speech alone or with oral speech and manual communication. Some disagreement was noted in the literature regarding the value of neonate screening programs, the minimum level of hearing loss which has educational significance, and the effectiveness of in-school auditory screening programs.

Studies involving auditory screening of neonates have resulted in varying degrees of success in identifying hearing impaired newborns (Meyer and Wolfe, 1975; Simmons and Russ, 1974; Shapiro, 1974; Goldstein and Tait, 1971). Some authors (Ehrlich, 1973; Lubchenco et al., 1972; Feinmesse and Bauberger-Tell, 1971; Kakalik et al., 1974) have suggested that only infants considered at risk for hearing impairment be screened. Perhaps, in developing a statement, the Joint Committee of the American Academy of Pediatrics, the American Academy of Ophthalmology and Otolaryngology, and The American Speech and Hearing Association has focused on part of the problem by recommending the development of a simple high risk register at birth with in-depth audiologic evaluation during the first 2 months of life with follow-up hearing evaluations provided by private physicians or well-baby clinics. An "at risk" infant is described as one with any of the following characteristics: affected family members, high bilirubin count, congenital rubella syndrome, defects of ear, nose, and throat, and small birth weight. Use of such a register at the University of Colorado Medical Center (Northern and Downs, 1974) has indicated that incidence of hearing handicap in the high risk group is 20 times that found in the general population. It was estimated from this project that about 6% of all newborn infants would be identified as "high risk" by such a register.

Differences also exist in the literature regarding the minimum level of hearing loss that should be recognized as being significant. Most definitions of hearing impairment used by the States specify decibel losses ranging from 27 to 37 decibels as the hearing thresholds for the hard of hearing. This range is supported by the American Standards Association (1951) and the International Standards Organization as reported by Davis (1965). Some authors are increasingly suggesting, however, that lower thresholds of hearing loss should be used in the screening process. Downs (1976) believes that a hearing loss exists whenever any of the following conditions exist or have existed:

1. Hearing loss at a minimum of 15 decibels or poorer.
2. Indications of serious otitis media in a child under the age of 2 for more than half the time for 6 months.
3. Fluctuating hearing levels from 0 to over 15 decibels, with levels worse than 15 more than half the time.

Downs points out in support of her position that in England a hearing loss of 20 decibels is considered significant. She claims that the effects of language deprivation in the young hearing impaired child are similar to those of a severely disadvantaged child and may result in differences of 30 to 50 IQ points. Downs points out, however, that using her proposed criteria would raise the prevalence of hearing loss in school children from the 1.25% presently reported by the U.S. Office of Education to almost 15%. Ling (1971) claims that 10% of school age children have a 15 decibel or greater hearing loss. Cozad (1974) suggests that determination of a 10 decibel hearing loss during screening is sufficient for in-depth evaluation. Other authors supporting the need for identifying even slight hearing losses are Kakalik et al. (1974), Wyatt (1965), Kavanagh (1971), Goetzinger (1965), Elliot and Vegeley (1968), Holm and Kunze (1969), and Kempe et al. (1972).

A final point of discussion regards the use of mass screening programs to identify possible hearing handicaps in school children. Many authors (Hewett, 1977; Kirk, 1972; and Kakalik et al., 1974) note that a loss as great as 30 to 40 decibels may not be noticed by parents and teachers, and the deviant behavior resulting may be incorrectly attributed to low intelligence or emotional problems. Kakalik and his colleagues (1974) recommend comprehensive mass screening for all young elementary school children and stress the following:

1. Good screening depends significantly on the skill of the screener and the quality and calibration of the audiometer employed.
2. Follow-up is the critical ingredient in a good, as opposed to an unsatisfactory, hearing conservation program.
3. Teachers in the early elementary grades, if trained to observe and recognize behavioral clues, are an underutilized source of early identification.

Cozad (1974) recommends screening all children each year from kindergarten through third grade and then screening every 2 or 3 years in the higher grades. His recommendation regarding the intensive effort at younger ages is supported by research (Dailey, 1961; Downs, Doster, and Weaver, 1965) showing that most hearing impaired children are identified in kindergarten and the primary grades.

On the other hand, pointing out problems, Lescouflair (1975) claims that audiometric screening is inadequate and cites evidence such as that of Belkin (1963) that only 50% of the children in New York City schools who failed the screening test ever received a clinical evaluation. Cozad reported in 1966 that more than 40% of the school aged children in Kansas had never had a hearing screening test, and that test procedures used were inadequate due to factors such as environmental noise, poorly trained personnel, and poorly calibrated audiometers. Lescouflair (1975) also reports a national survey indicating that 30% of the school aged population have medically treatable hearing problems (such as cerumen occluding auditory canals), and only about 1% have true hearing losses (based on a threshold of 26 decibels or more). He criticizes present screening programs for not identifying mild hearing losses or treatable ear disease.

With an incidence rate estimated by the Office of Education (1975) of 0.075% for deaf and 0.5% for hard of hearing, evaluation by experienced personnel becomes a special problem. Although States usually require psychological examinations of hearing impaired students, there are few psychologists with special training or experience with the problem of hearing impairment. This is the fact despite the emphasis by specialists that special training is necessary if psychologists are to make valid assessments and recommendations for student placement (Myklebust, 1960; Vernon, 1964; Siskey, 1966). Bothwell (1975), for example, states:

> It is a strange anomaly of our school systems that children with hearing impairment, the most difficult of all educational handicaps, run the greatest risk of being evaluated by inexperienced personnel. Many doctors and other diagnostic personnel have never seen a deaf child and few have an understanding of the potential educational danger of almost any degree of hearing loss. For the majority of hearing impaired children, however, interdisciplinary evaluation services by experienced personnel are fragmented, haphazard, remote from the school setting, or nonexistent.

Levine (1974) in a survey of psychologists working with deaf found that only 9% of the 178 respondents were school psychologists and 83% of the total group had had only on-the-job training for the complex task of evaluating deaf children.

The most commonly used intelligence tests with these children are the WISC performance scale and the Leiter scale, although neither of these has been standardized on deaf subjects (Levine, 1974). Despite the heavy influence on personality that the severe communication disorders have been shown to have, Levine reports that only 40% of psychologists surveyed employed any type of personality measure with hearing impaired students.

The difficulty of assessing the hearing impaired child is also pointed out by Bothwell (1975) who notes the high number of hearing impaired children being placed in classes and institutions for the retarded and a high incidence of emotionally disturbed children found among the hearing impaired. Vernon and Brown (1964) report that tests given to deaf children by psychologists not experienced with the deaf or hard of hearing are subject to appreciably greater error than tests given by psychologists experienced with this population. Hiskey (1955) points out that intelligence tests that emphasize timed trials are not as valid as other tests for young hearing impaired children, a fact which the inexperienced psychologist may not consider. Vernon (1974) suggests that a child with large discrepancies between verbal and nonverbal tests in the presence of a hearing loss of 25 decibels be reevaluated on psychological procedures designed for those with profound hearing losses.

In addition to psychological and audiological information, Kopp (1971) recommends that evaluation is needed in language output competency (both written and oral); language input competency in auditory,

lipreading, and manual communication; and in speech intelligibility. Vernon (1974) stresses the importance of assessing communication skills since it is in the realm of communication that hearing loss presents its major handicap. He recommends the systematic assessment of reading and writing ability, speech skills, and speechreading skills.

Wisland (1974), Yater and Simms (1974), Moores (1976), Hardy-Beck (1975), and Steinkamp and Quigley (1977) are representative of authors who agree that the assessment of communication skills is the most critical aspect of the evaluation process. They emphasize that reading, writing, speech, and speechreading should all be evaluated. Wisland (1974) suggests that, depending upon age, the child's knowledge of sign language and fingerspelling should also be assessed. The poor reading ability of deaf students has been repeatedly demonstrated (Myklebust, 1964; Goetzinger and Rousey, 1959). Wrightstone, Aronow, and Moskowitz (1963) found that less than 10% of deaf children between 10 and 17 years of age could read on a fourth grade level and that the average mean reading score of the deaf rose between the ages of 11 and 16 from a grade equivalent of 2.6 to 3.4, less than 1 year of improvement in 5 years of schooling.

The writing skills of hard of hearing and deaf students have been similarly shown to be inadequate when compared to those of hearing students. Myklebust (1964) determined that the mean score in written language of 17-year-old deaf children approximated the mean score achieved by 7-year-old hearing children. It would appear that any educational assessment of the deaf child should include indepth evaluation of reading and writing skills by someone familiar with the types of errors most commonly made by the deaf or hard of hearing child.

Yater and Simms (1974) offer suggestions for evaluating the speech of the hearing impaired child. They also stress the difficulty hearing impaired children are likely to have in understanding oral or written instructions. This has the secondary effect of the deaf child's appearing to have lower abilities than actually exist.

Frisina (1967) and Hobbs (1975) stress the importance of including the child's total environment in any evaluation process. They emphasize that family and socioeconomic factors as well as the child's history of language instruction and enrichment are environmental variables impinging directly on the child's educational prognosis. Due to the practical difficulties of providing qualified and experienced evaluators for the low incidence hearing impaired population, Frisina (1967) recommends the use of regional diagnostic centers to assure competent evaluation.

The Federal requirement that all children be educated in the least restrictive alternative placement has interesting implications for the placement of seriously hearing impaired children. Early identification (during infancy and the language learning age) and early provision of special services is perhaps more crucial for the hearing impaired than for any other disability group. If the hearing impaired child must prove his/her inability to cope with the regular program before being eligible for special services, valuable time in the development of language skills will have been lost.

The conflict between the total communication and oral communication methods of teaching deaf children may also be affected by the least restrictive alternative requirement. Although Birch (1975) maintains that either method may be appropriate for a child, he suggests that, for the total communication method, hearing children and regular class teachers learn sign language and fingerspelling or that school systems employ interpreters to sign and fingerspell what the teacher is saying. The oral approach seems to lend itself more readily to serving the deaf hearing impaired children in regular programs. In the process, however, young children may not receive the optimal amount of language input claimed as essential by the proponents of the total communication approach. Northcott (1972) emphasizes the importance of educational evaluation prior to regular class placement:

> In addition to using caution with classification systems, educators must also exercise care in predetermining the extent of special education services needed in relation to the degree of loss. Instead, the characteristics of need may be defective speech, with substitutions, omissions, or distortions; reading problems; immature language patterns; a lower level of abstraction; and perhaps lower interpersonal relationships. Some children with severe losses may be readily integrated into regular classrooms, whereas a child with a less severe, or moderate, loss may need extensive special education services for the majority of his school day.

There is agreement that the most important factor in determining program placement is the degree to which the hearing loss has affected language development. Pros and cons of placing hearing impaired children in regular programs have been investigated by Jones and Byers (1971), Bower and Gillies (1972), Nix (1976), and others. Apparently what can be comfortably concluded is that the placement decision is a highly individual one. According to Cantor et al. (1977):

> The decision as to whether to mainstream a hearing handicapped child or provide a segregated program for the deaf is not a clearcut one. The decision must depend on a thorough evaluation of the child's language development, intelligence, learning disabilities, emotional development, and social maturity. The decision, however, is not irrevocable, and careful, continuing observation and evaluation of the youngster in the setting chosen is imperative to verify its appropriateness as the child continues to develop.

Speech Impaired

Summary of the Literature Review

The review of the literature revealed essentially that the Federal definition of the speech impaired can be criticized for its apparent breadth. Specifically and especially the term *communication disorder* can be accurately applied to hearing impaired children and children with learning disabilities. Further, the danger of any listing was considered in relation to additional conditions that can be considered a part of this category. Other topics receiving literature attention include consideration of the optimum age for the identification and remediation of stuttering problems, the necessity for extensive, comprehensive evaluations of all speech impaired children regardless of the presenting problem, and finally, the delivery of services under this category to severely handicapped children.

Definitions

The Public Law 94-142 regulations include the following definition of "speech impaired":

> "Speech impaired" means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance.

A notable feature of this definition, which has received some attention in the literature, is the breadth of handicapped children that can be considered to possess a "communication disorder." As has been previously presented, most hearing impaired children could be considered under this definition, since they are handicapped to the degree that their education is adversely affected and they do possess a communication disorder. It is also well known that many speech therapy and pathology personnel provide important services to hearing impaired children.

Another categorical area that appears to overlap with this definition is "specific learning disability." Since the most common definition of learning disability requires "a disorder in one or more of the basic psychological processes involved in understanding or in using language," it is in fact similar to the words used to describe the language handicapped served in speech programs. Connor (1975) notes this overlap as follows:

> Children classified as having oral-language disabilities often exhibit deviations in reading and writing and could be classified as having learning disabilities. . . . Of the terms used to describe communication disorders, the one which currently offers the most difficulty is "language disorder" or "language disability" in children. . . . Labels

> such as "language disability" and "language disorder," however, lack the specificity of implied neurological etiology. . . . Clearly, the label is too broad to convey meaning other than in a very general sense.

Definitions identical or similar to the Federal definition are rarely found in the literature. Any listing of sample conditions always raises an obvious question concerning conditions not included. Hewett (1977), for example, lists the following types of speech defects: disorders of articulation, disorders of voice, stuttering, delayed speech development, cleft lip and palate, disorders associated with cerebral palsy, and disorders associated with impaired hearing. Van Riper (1972) in another list reports that speech disorders fall into four categories: articulation, time, voice, and symbolization (language). He further reduces these categories to include: lisping, lalling, baby talk, distortions/omissions, substitutions, stuttering, cluttering, dysphonia, disorders of pitch, disorders of voice intensity, pitch breaks, disorders of voice quality, dysphasia, delayed speech, cleft palate speech, foreign accent, deaf and hard-of-hearing speech, and cerebral palsy. Dickson (1974), in another categorization of communication disorders, includes the following: language disorders, articulation disorders, stuttering, phonatory disorders, and hearing impairment. He further subdivides language disorders into those associated with hearing impairment, neurological impairment, or environmental deprivation. Johnson (1967) includes speech disturbances associated with impaired hearing and congenital aphasia in his description of this population. Lloyd (1976) sees communication disorders as including learning disabilities, autism, cerebral palsy, epilepsy, mental retardation, and hearing impairment. It is clearly seen that the definition of this category in the literature is quite varied.

Some authorities do not advocate definitions of speech handicapped children that contain lists of included conditions as that found in the Federal approach. Van Riper (1972), for example, has suggested the following definition:

> Speech is defective when it deviates so far from the speech of other people that it calls attention to itself, interferes with communication, or causes its possessor to be maladjusted.

Use of this definition emphasizes the key factors of conspicuousness, unintelligibility, and producing maladjustment. A similar definition which emphasizes the conspicuous nature of the handicap is suggested by Johnson (1967):

> A child's speech presents a problem for himself and for others when his listeners pay critical or anxious, or disapproving attention to how he speaks, or are distracted from what he is saying by his way of saying it.

Identification of speech impaired children is usually accomplished through mass screening programs or teacher referral (Hewett, 1977). According to Winitz (1961) the function of a screening test is "to

provide a comparison of a child's articulatory performance with that of his peers." Typically, screening tests for speech problems involve the following: (1) the naming of objects or pictures selected so as to include all the most difficult speech sounds, (2) the repetition of test sentences designed to test the errors on just one sound, (3) serial speech responses such as counting or naming the days of the week, (4) repeating nonsense syllables, and (5) conversation and questioning (Van Riper, 1972). Since many articulation disorders are a function of maturation, Van Riper (1972) reports the development of instruments which, when applied to first-grade children with articulation errors, are able to identify those children likely to outgrow their misarticulations by the time they enter third grade.

An important question discussed in the literature is the identification of stuttering, especially in small children. Silverman and Williams (1967) and Johnson (1959) suggest that it is very difficult to distinguish stuttering from normal disfluency. One school of thought (Johnson, 1961; Shames and Sherrick, 1963), however, suggests that the identification and correction of normal disfluencies by parents of preschool children tends not to decrease but rather to increase stuttering behavior. Wingate (1976) disagrees and states that it is difficult to differentiate stuttering from normal nonfluency and quotes West (1957): "Everyone but the expert knows what stuttering is." Additionally Wingate reports several studies showing that lay judges agreed among themselves more consistently than did the speech pathologists when identifying stuttering behavior.

Turton (1975) explains that a child identified as possibly having a speech handicap should be evaluated for determination of variables outside the speech and language area that may relate to the problem, including hearing impairment, intellectual deficits, and behavior disorders, and the ability of the child to produce and to comprehend the language of the culture. Turton also recommends the use of both formal and informal measures in evaluative activities since formal tests provide normative data, but are limited because they sample only a limited number of responses. Hewett (1977) reviews methods of assessment such as the use of spontaneous and imitative tests for articulation, and tests of auditory discrimination. He also notes the importance of assessing the nature of the social situations that a stuttering child finds most stressful, and recommends that a physician examine the larynx in children with suspected voice problems. McLean (1974) recommends that children be evaluated from two basic points of reference:

> The first is a comparison of the child's language with the standard language form of the culture. The second point of reference is a comparison of the child's language with the language of other children at the same age level. The *difference* between a particular child's language and the language he will eventually need to become an accepted member of his language community is considered as is the degree of *deviance* between the child's progress toward the standard forms compared to other children of his relative age level.

Yoder (1974) indicates that assessment should include consideration of the child's past development and the sequence of acquisition of speech and language behaviors as well as the child's present repertoire of language and language-related behaviors. He also recommends the use of a behavioral history, but stresses that the search for causes is usually unprofitable and that "the role of the speech and language specialist is to evaluate and teach language and speech behavior, not to establish medical and psychological labels for children's behavior or lack of it." Yoder further suggests that present language and speech behavior be assessed through the use of standardized observations (formal tests), nonstandard observations (the evaluation of free language and speech samples), and the consideration of extra-linguistic variables related to language use including attention, memory, perception, discrimination, motivation, and environmental consequences.

In sum, the literature suggests that the extensiveness of the evaluation should be related to the production of as well developed a remediation program as possible.

The traditional delivery system for speech impaired children has been periodic removal from their regular classes for special speech therapy sessions. This approach, in part, reflected the fact that such programs were designed and available to mildly speech impaired children. At the other end of the severity continuum, however, some nonverbal children have been placed in various residential institutions for the emotionally disturbed or mentally retarded (McLean, 1974). Absent from the literature was extensive discussion of service delivery systems of speech clinicians serving other categories of handicapped children and particularly those with severe problems. It is anticipated that with the zero reject mandate varied speech professionals will be providing services to far more seriously handicapped students than those served in traditional "speech programs."

Visually Handicapped

Summary of the Literature Review

Throughout the literature regarding the definition of this population, considerable concern is expressed about the traditionally used legal/medical definition based exclusively on standards of acuity. The educational literature consistently indicates that the traditional legal definition should be eliminated in favor of a system of categories that relate to functional impairment. With regard to evaluation, the literature calls for the development of improved standardized screening tests as well as the collection of data regarding the effectiveness of screening programs both at the preschool and school age levels. Further, it is recommended that psychological evaluation of the visually impaired child be conducted by an experienced examiner aware of the primary and secondary effects of visual impairment. As to placement, it is indicated that most visually impaired children who possess no other handicaps can be successfully integrated into regular programs if needed related services are available. Finally, regular teachers, special educators of the visually impaired, medical personnel, school administrators, specially trained psychologists, and parents all need to be involved in identification, evaluation, and program development and placement decisions for the visually impaired child.

Definitions

The regulation for Public Law 94-142, the Education for All Handicapped Children Act, defines "Visually Handicapped" as pertaining to "a visual impairment which, after correction, adversely affects a child's educational performance. The terms include both partially seeing and blind children." The primary characteristic of this model is that it defines the child's visual impairment in terms of the child's ability to perform in the educational setting or function in everyday life situations.

Gearhart and Weishahn (1976) utilize a succinct educational definition, stating that "the visually impaired child may be defined as one whose vision is limited to such an extent that it may require educational modifications and adaptations." Halliday (1970) points out that there appears to be a growing acceptance of the Federal type definition model.

> In recent years, definitions have become more attuned to the life situation. For example, from the educational point of view, the blind child is now considered to be the child who learns educationally through braille and related media with little or no residual vision employed. The partially sighted child is felt to have useful vision for educational purposes, but is limited to the extent that some special educational provisions are necessary.

Traditionally, however, definitions of blindness and of partial sightedness have been based on acuity and/or a narrowed visual field. The most frequent definition of blindness found in the literature and in State policy is:

> Blindness is defined as visual acuity, in the better eye with correction, of not more than 20/200 or a defect in the visual field so that the widest diameter of vision subtends an angle no greater than 20 degrees.

Jan et al. (1977), in reviewing the history of this definition, points out that it was developed in 1935 as a definition of "economic blindness" and that it was intended for adults to aid in determining eligibility for welfare. This same author explains the difficulties of using this medically based definition with children by stating:

> An accurate diagnosis of distance visual acuity can rarely be established until about 3 or 4 years of age and, when the child is multihandicapped, only years later or perhaps never. Many "legally blind" persons do not consider themselves blind and resent this term because they are able to function in sighted society. . . . Now there is much more emphasis on how the child uses his remaining vision, i.e., his visual efficiency. In fact, the selection of a proper educational facility for a child depends not only on his visual efficiency but on other factors.

This same definition, however, is still used by organizations such as the National Society for the Prevention of Blindness.

The growing acceptance of an educational/functional model like that in Public Law 94-142 began as a result of a number of factors. One of primary importance is that over the years educators discovered that there is considerable variance between individuals with the same measured acuity (Scholl, 1968; Gearhart & Weishahn, 1976). For example, two children may each be classified as legally blind, but one may be able to read printed material, whereas the other may have to read braille (Scholl, 1968; Gearhart & Weishahn, 1976). According to Scholl (1968):

> Another factor contributing to the decline in using the legal definition of blindness as a criterion for the selection of the mode of instruction is the changing philosophy which is moving away from a conservation of vision or sight saving approach toward emphasis on increasing visual ability by its wise use in a good visual environment. This change in emphasis encourages the severely visually impaired child to make maximum use of whatever residual vision he possesses. The decision regarding educational placement and the determination of which media of instruction should be employed are now commonly made by the educator, using the ophthalmological report as a guide.

Bishop (1971) suggests a functional definition that distinguishes between partial and residual vision:

> The child's vision is considered to be partial when it interferes with efficient learning but still enables him to use print as his chief medium of learning. Residual vision is defined as insufficient vision to read print of any size but more vision than light perception.

Jan (1977) reports that an extension of the legal definition of blindness often used describes partial vision in terms of visual acuity in the artificial range of 20/70 to 20/200. He points out, however, that this is an incorrect concept, because one cannot define the functional ability of a child with a simple physiological measurement.

The Federal definition avoids the pitfalls of differentiating blind and partially sighted children by including them both in the term "visually handicapped." Despite this softening of the two levels of severity, the literature suggests a need for some method of differentiating severity of handicap within the broad category of visual handicap.

Scholl (1975) has recommended a four-level functional system for both defining and classifying visual impairment. The first level describes individuals who are unable to read or write even with the aid of optical or visual enlarging devices, unable to identify familiar objects in the environment, and unable to maneuver safely through an unfamiliar environment without the aid of a dog, cane, or sighted person. On the second functional level is a visually handicapped individual described as unable to read or write even with special aids, unable to identify familiar objects, but able to move safely through an unfamiliar environment without assistance. The third level describes an individual who is able to read or write with or without special aids, able to visually identify objects, but unable to move safely through an unfamiliar environment without help. Finally, on the fourth level are individuals who are able to read and write with or without special aids, able to identify objects, and able to maneuver safely through an unfamiliar environment without assistance. Hewett (1977) suggests that the use of these categories of severity offers information directly relevant to the special and regular educator.

A similar classification system, again based on four categories depending on ability to read print and maintain mobility, has been proposed by Genensky (1970) as part of a Rand Corporation project. In summary, an advantage of any functional classification system is that an individual is not seen as being locked into one category but can, due to training and improved technology, move into a higher functioning category.

Identification, Evaluation, and Placement

Although the visually handicapped are estimated to be a small incidence population (0.10% of school age children, according to BEH 1975 figures), the need for screening takes on increased importance when it

is realized that, as HEW (1964) reported, about 25% of children aged 5 to 17 have some type of eye condition requiring special care. It was further indicated that almost all of these children will not be included in the handicapped population after they have received medical treatment and/or been fitted for corrective lenses. Complicating the identification situation however, is, as Kakalik (1974) notes, that children are often unaware that their vision is impaired and therefore do not seek help. Related is that while Oberman (1966) and Lin-Fu (1971) describe a particular need for screening of preschool children, they also indicate a lack of criteria to govern preschool screening. Kugel (1972), on the other hand, offers screening criteria such as 20/50 for 3-year-olds and 20/50 or the presence of strabismus for 4- to 5-year-olds.

Lin-Fu (1971) notes that there are two types of screening approaches used, the clinical history and vision tests. The use of clinical histories, however, is not common in identification programs, despite the fact that items such as a family history of visual problems or the use of oxygen therapy at birth can alert screening personnel to an increased chance of visual difficulty. Part of the clinical history also includes noting behavior indicative of visual problems, such as excessive blinking, holding books too near or too far, and poor performance in motor activities.

As suggested, mass screening programs for the preschool population suffer from several problems, including the lack of a formal institutional mechanism (like the schools) to guarantee that each child will be screened and the lack of standardization of screening tests resulting in false positives. Kakalik (1974) concluded that mass screening of preschoolers is not desirable until more information is gained about the quality of screening techniques, the expected incidence and referral rates for various kinds of visual disorders, the costs of mass screening programs for preschoolers, and the magnitude of the benefits that might accrue to the overall population as a result of such an undertaking.

Guttman (1956) and the National Society for the Prevention of Blindness (1961) and Kakalik (1974) all report that carefully controlled studies of the reliability of currently available school vision screening tests and programs have not been nationally obtained. Kakalik reports that the limited studies completed have produced the following findings:

1) The programs are relatively expensive.
2) Good screening programs, as measured solely by high rates of confirmation of true positives by diagnosticians, have trained and certified visual-technician specialists either closely supervising or actually conducting the tests.
3) Something on the order of 10% should be expected to "fail" the school vision screening programs, although the prevalence rates of disorders contributing to this rule of thumb are not well or reliably reported.
4) Follow-up is a critical component in those programs thought to be relatively effective.

In conclusion, Kakalik called for comprehensive mass vision screening for every school age child in the United States. This recommendation was contained in the well-known 1974 Rand Corporation Report.

Throughout the literature, it is emphasized that evaluation of visually handicapped children is more complex than merely finding tests standardized on this population, even though that in itself is difficult. Barraga (1976), Jan (1977), and Elonen (1970) make the following point:

> Often blindness separates children from their environment, and they remain in a nonstimulated, self-preoccupied state if not actively forced to join in the activity around them. In assessing these children, it is essential to establish whether or not they have had an opportunity to learn things expected of a child that age, and whether, after they have been adequately stimulated, they are still unable to do such tasks.

Jan (1977) notes that evaluation of visually impaired children must be approached initially by rejecting many of the standards set by the sighted since the same patterns of growth and development may not apply. Tillman (1967), in a study comparing the performance of blind to nonhandicapped children on the Wechsler Intelligence Scale subtests, found such characteristics of the blind as a lack of integration in educational experiences resulting in isolated bits of knowledge, verbal abilities focusing on a basic vocabulary with little elaboration, and abstract conceptualization at a concrete and functional level.

Barraga further expands upon this situation by pointing out that:

> Despite the fact that visually handicapped children and youth as a group were found to function psychologically and educationally at levels below those of sighted children of the same age, more complete evidence has shown that in reality many children seemed to achieve just as well or better in academic work and were able to perform at comparable levels or above in real-life situations. Contradictory observations of this nature have caused both psychologists and educators to examine not only the procedures used in evaluation but also to call into question the entire approach toward assessment and evaluation as applied to visually handicapped children.

The lack of a normal experiential background in severely visually handicapped children causes Jan (1977) to recommend replacement of traditional IQ tests with tests of learning aptitude in which the process of learning is examined rather than the product of previous learning. Bauman (1974) and Barraga (1976) note that many of the tests designed specifically for use with the visually handicapped are recent, experimental, have poor norms, and have not been studied and validated with any but the original normal normative group which was often an institutionalized population. Barraga (1976) summarized the issue by stating that:

> Throughout the field of education. the question of assessment and evaluation is still a worrisome matter because of the questionable validity of some tests and the unreliability of the scores obtained. This fact is especially true in special education when considering using psychological and educational evaluation of present functioning in visually handicapped children for possible predictive purposes. Since many educators working with visually handicapped children are not psychologists, and since many psychologists have had little opportunity to study the effects of reduced vision or total lack of vision on children's behavioral responses, communication between the fields and coordinated approaches to evaluating individual functioning are even more difficult to come by.

Scholl (1968) also focused on the value of psychological evaluations of visually handicapped children by stating that:

> Frequently, valid psychological test results are not available, partly because psychologists who are requested to evaluate the visually impaired child are often seeing this type of child for the first time. Consequently, test results should be viewed with a degree of skepticism, and the child should be given the benefit of the doubt, particularly where mental and educational retardation and/or emotional disturbance are indicated.

The heterogeneity found in the visually handicapped population and the shortage of trained and experienced evaluators stressed throughout the literature, lead to the conclusion that there are few psychologists able to evaluate adequately severely visually impaired children.

Gearhart and Weishahn (1976) report that, though the integration of children representing other handicapping conditions is a relatively recent trend, children with vision impairments have been integrated into regular classrooms for more than half a century. They claim that early professionals recognized that children with vision impairments could be educated with their sighted peers with only minor modifications and adaptations, and that the limitations imposed by a visual disability did not require a special curriculum. On the other hand, early residential schools for blind children were begun as early as 1832 (Hewett, 1977). Hewett also notes the existence in the 1930's of "sight saving" classes based on the belief that partially seeing children actually damaged their eyes by using them.

A problem reported by Scholl (1975) is that using the criterion of legal blindness as the basis for deciding whether a child should be taught braille resulted in the exclusive teaching of braille to many children with borderline vision, leading to situations in which such children read the braille code visually rather than by means of touch. She further explained that these children could not read print, not because of visual impairment, but rather because they had not been taught to read print. Gearhart and Weishahn (1976) stress the need

of a continuum of services for the visually impaired. They recommend that any placement decision consider the following variables: age, achievement level, intelligence, presence of multiple handicapping conditions, emotional stability, nature and extent of eye condition, wishes of students and parents, recommendations of staffing team, and the availability of services. The literature is collectively clear in concluding that many visually impaired children need only special orientation, mobility training, and some modifications in instruction such as the use of large print to function effectively in the regular class.

Seriously Emotionally Disturbed

Summary of the Literature Review

Much attention in the literature in this area is devoted to discussing the difficulties of describing children within this population with specificity. This is particularly true with regard to varying levels of severity, a phenomenon that is made more complicated by the exclusion of socially maladjusted from the Federal definition. Also raised, and not unlike some other categories, is the difficulty of differential diagnosis, particularly between the severely disturbed and the mentally retarded. At the same time, however, identification of psychotic and severely emotionally disturbed children is not seen as difficult, due to the ease of recognition of the aberrant behavior. Identification of milder emotional or behavior disorders is increasingly seen as an appropriate function of the regular teacher. To date, evaluation of emotionally disturbed children has been characterized by a wide variety of theoretical approaches with behavioral and ecological assessment frequently advocated for educational settings. Conspicuously absent from the literature is an extensive discussion of the assets and liabilities of various placement practices for these children. What is clear is that in all likelihood the full range of options will be needed to serve all seriously emotionally disturbed children.

Definitions

Historically, emotional disturbance was considered a psychiatric rather than an educational problem, despite the fact that this population was one of the first to receive special education services within the public school system. School systems in large cities have operated educational programs for emotionally disturbed and socially maladjusted children for over 50 years (Haring and Phillips, 1962), often using other terminology such as "unruly" and "incorrigible." Current terms of emotional disturbance and behavioral disorders gradually entered the educational system without any apparent effort at definition. Kanner (1962) noted:

> It is impossible to find anywhere a definition of the term "emotionally disturbed children" which had somehow crept into the literature some 30 years ago and has since then been used widely sometimes as a generality with no terminologic boundaries whatever and sometimes with reference to certain psychotic and near psychotic conditions.

Public Law 94-142 may change the picture, since for the first time, there is a Federal definition of "seriously emotionally disturbed." The law has taken a definition created by Bower (1960, 1967), added the term "seriously" to "emotionally disturbed" and also specified inclusions and exclusions. Following is the Federal definition:

> "Seriously emotionally disturbed" means a condition exhibiting one or more of the following characteristics over a long

> period of time and to a marked degree: (1) an inability to learn which cannot be explained by intellectual, sensory, or health factors; (2) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (3) inappropriate types of behavior or unhappiness or depression; or (4) a tendency to develop physical symptoms, or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted but not emotionally disturbed.

An initial problem identified in the literature that applies to this definition is that since all the listed characteristics may be true of all children at some times and to some degree, the question of severity reflected in the phrase "over a long period of time and to a marked degree" is of special significance. Different studies (Glavin, 1972; McCaffrey, 1963) indicate that only about 30% of children identified as having a behavior disorder at a point in time will be similarly rated 3 years later. In a report for the Joint Commission on Mental Health of Children (Glidewell and Swallow, 1968) it was estimated that 30% of school age children have some intrapersonal or interpersonal difficulties at a given time.

A second problem inherent to this category and perhaps any definition used lies in the possibility of identifying as emotionally disturbed, children who choose to behave somewhat differently than their peers. Bower (1967) suggests differentiating the child whose behavioral deviation is caused by emotional problems and the child whose behavior is simply different by determining the source of the problem. He sees the behavior of the emotionally handicapped child to be not a matter of choice but of necessity. He stresses that strange, unconventional, or deviant behavior cannot in and of itself be regarded as a sign of an emotional handicap. Determination of the "source" of a behavior by educators would seem to be equally fraught with pitfalls.

A third problem in the use of any common definition of emotional disturbance is in differentiating it from other conditions such as learning disability. The first two of the five listed characteristics, inability to learn and unsatisfactory interpersonal relationships, are as characteristic of children identified as learning disabled as those identified as emotionally disturbed. The remaining three characteristics, inappropriate behavior, unhappiness, and illness, are certainly commonly seen in learning disabled children. Hewett (1976) declares: "It is the author's contention that these two types (emotionally disturbed and learning disabled) of children are often indistinguishable, and he challenges the contention that they can be separated with certainty, as well as the usefulness of attempts at differential diagnosis."

Complicating the picture, Kauffman (1977) points out: "There are no tests that measure personality, adjustment, anxiety, or other relevant psychological constructs precisely enough to provide a sound basis for definition of emotionally disturbed. The reliability and validity of psychometric tests are simply not adequate for purposes of dividing

the disturbed from the nondisturbed." A number of authors (Balthazaar and Stevens, 1975; Lovaas et al., 1973) note that severely retarded and severely disturbed children also share many common characteristics. Wing (1972) suggests that it is even difficult to separate the severely and profoundly disturbed from the deaf, blind, and brain damaged. The many similarities and problems of differential diagnosis between mild emotional disturbance, learning disabilities, and mild retardation are discussed elsewhere in this report.

The inclusion of the adjective "seriously" in the Federal definition implies that severity of symptoms may be more important than their mere presence or absence. Bower (1960, 1967), in originally casting the definition adopted for Federal purposes, recognized the importance of severity and recommended the establishment of a continuum upon which the degree of handicap can be perceived and perhaps estimated, especially as it relates to possible action by the school. He suggested a continuum ranging from children who experience and demonstrate the normal problems of everyday living, growing, exploration, and reality testing; through children with fixed and recurring symptoms of emotional disturbance who can, with help, maintain some positive relationships in a school setting; and finally, children with fixed and recurring symptoms of emotional difficulties who are best educated in a residential school setting or temporarily in a home setting. Bower does not include this most severe group in his definition of the emotionally handicapped. In the Federal definition, however, schizophrenic and autistic children, those likely to be in Bower's most severe category, are specifically included.

In reviews of existing classification systems of psychopathological disorders in childhood (Prugh, 1975) and behavioral disorders (Phillips, 1955, 1975), the discussion is almost entirely in terms of the psychiatric classifications developed by the Group for Advancement of Psychiatry in 1966, the Standard Nomenclature of Diseases and Operations, revised in 1969 by the American Psychiatric Association, and the International Classification of Diseases put out by the World Health Organization in 1967. Psychiatric terms commonly used include "childhood psychosis," "symbiotic psychosis," "infantile autism," "psychoses associated with organic brain syndromes," and "adjustment reactions." Haring (1974) points out the risks of the use of such labels by special educators:

> First, the label may induce inappropriate expectations in the teacher, who may, for example, "pathologize" the child, i.e., interpret essentially normal behavior as deviant simply because the child is "schizophrenic." Second, the label does not imply that a specific treatment will be effective. Third, the label may be reified, i.e., used to explain the behavior it merely describes, as when it is said that a child self-stimulates because he is autistic. Fourth, many irrelevant factors, such as the availability of treatment, the biases of the diagnostician, Federal and State legislation concerning handicapped children, the child's social class, etc., appear to play a very significant role in determination of how a child is classified.

A potential problem with the definition referred to in the literature concerns the exclusion of socially maladjusted children who are also not emotionally disturbed. Discussions in the literature usually include the socially maladjusted in discussions of the emotionally disturbed. However, Quay (1963, 1975) notes that there is a type of child he calls a "socialized delinquent" whose traits did not account for a single distinguishing factor in his research. He suggests that the socialized delinquent may actually fall outside the realm of the emotionally disturbed since such children's socially maladjusted behavior in school may actually represent socially adjusted or appropriate behavior in the world of the street where they live. Yet it was also recognized in the literature that the second characteristic listed in the Federal definition of emotionally disturbed, unsatisfactory interpersonal relationships, is often considered as a synonym for the term "socially maladjusted."

Identification, Evaluation, and Placement

Use of the qualifying word "seriously" in the Federal definition raised a number of questions regarding the identification, evaluation, and placement of these children who were discussed in the literature. Long (1976) reports that the Joint Commission on the Mental Health of Children and Youth found that studies of American children have shown that 0.2% are psychotic, that 2 to 3% are severely disturbed, and that an additional 8 to 10% have emotional problems needing specialized services. In 1975 BEH projected an incidence rate of 2% for school age emotionally disturbed children.

Kauffman (1977) indicated that if only the psychotic and the most severely disturbed children are intended to be included there is no issue. He indicates that these children have such bizarre behaviors that they are identified early. Kolvin (1971) and Ornitz and Ritvo (1976) report that autistic/schizophrenic children invariably show obvious symptoms before 30 months of age with many children showing symptoms from birth. Further, they point out that parents or others close to the infant are often the first to identify that the child may have severe problems. The literature is consistent when indicating that identification of the psychotic and severely disturbed child would be aided if parents, when seeking help, were assured that psychosis in infancy is rarely the result of their behavior.

Kauffman (1977) presents a reality view regarding identification of seriously emotionally disturbed children:

> With the current problems of definition and classification, in addition to the fact that special education services will likely be available for only a small proportion of the children thought to be disturbed, identification is not a crucial concern in most cases. That is, usually only the most severely and obviously disturbed children become candidates for special education services. Because the available services lag so far behind the number of children who could be identified, there is seldom a problem of deciding whether or not the

children in question actually need help. Typically the problem is deciding which children need help most desperately.

With regard to identification of the less severely emotionally disturbed, there is a developing literature regarding the teacher's role in the screening process. Long (1976), for example, notes that:

> Teachers have a unique role in screening and its counterpart, evaluation of change. Teachers are the only trained professionals who see all children in many settings, encouraging a broad perspective. . . . Teachers' broad experience in the range of normal age-related behavior can serve as a base for evaluation. Moreover, in many cases, the teacher's contact with the child's home or community life adds additional awareness.

Recommended screening procedures for regular teachers include the use of varieties of behavior check lists and rating scales to assess conduct problems, personality, maturity, academic motivation, socioemotional status, teacher or parent dependence, distractability, and peer relations (Gearhart and Weishahn, 1976). Bower and Lambert's (1976) screening procedure is noteworthy because it is based directly on their definition of emotional disturbance, which uses the same five factors listed in the Federal definition. They describe procedure as consisting of three rating scales used in combination for an initial screening of each pupil--a teacher-rating scale, a peer-rating scale, and a self-rating scale. The threefold screening procedure is intended to make use of the teacher's professional expertise while recognizing also its clinical limitations. Teachers using the procedure are reassured by Bower and Lambert, who say that:

> Few professional persons, no matter how well trained, can make ratings of others with absolute certainty and complete comfort. . . . Remember that it is not your judgment alone that will be used to determine whether or not a pupil is developing emotional difficulties. Your perception of a child's behavior will be combined with the perceptions of the child himself and those of his peers--to make the final judgment about screening a child.

Kauffman (1977) has written that the area of emotional disturbance is particularly vulnerable to problems of evaluation and says that:

> There are no tests that measure personality, adjustment, anxiety, or other relevant psychological constructs precisely enough to provide a sound basis for definition of "emotionally disturbed". . . . Some of the difficulty in measurement is a result of attempts to assess supposed internal states or personality constructs which cannot be observed directly. Direct observation and measurement of children's behavior have in recent years reduced reliance on standardized psychometric tests, but these newer techniques of assessment have not resolved the problem of definition.

Worthy of note is that the field of emotional disturbance has also been characterized by a wide variation of theoretical and related evaluation models. Rhodes and Tracy (1972) identify five main conceptual models: the psychodynamic model, the biological model, the sociological model, the behavioral model, and the ecological model. The last two models, behavioral and ecological, appear to be increasing in popularity within the educational setting.

The Federal definition includes the clause "an inability to learn which cannot be explained by intellectual . . . factors." The relationship between mental retardation and severe emotional disturbance is, as the literature indicates, complex. Specifically discussed is the problem of testing the intelligence of severely disturbed children. De Meyer (1974), for example, in a 5-year study of 115 autistic persons, found that 94% produced overall IQ scores below 68. Freeman and Ritvo (1977), in discussing the difficulties of conventional IQ testing with autistic children, claim that introduction of behavior therapy techniques into the testing situation to control noncognitive behavioral factors such as hand-flapping and intermittent attending allow the evaluator to obtain a meaningful psychometric evaluation.

Behavioral evaluation has been discussed by many (Dickson, 1975; Haywood et al., 1975; Phillips et al., 1975; Morse and Tracy, 1972; Spivack et al., 1971). Central to the theory of behavioral assessment is its direct application to behavioral intervention. Goodkin (1967) describes a basic difference between traditional assessment and behavioral assessment models by noting that there is no clear model of normality within the behavioral therapy approach. According to Goodkin, then, one of the consequences of not having a model of maladaptive behavior is the inability of the behavioral analyst to describe fully what might be ideal adaptive behaviors.

There is also considerable discussion in the literature about ecological assessment. In this approach the total context of the child's functioning is considered. Authors who have focused on this approach include Redl (1959), Rhodes and Tracy (1972), Rhodes (1970), Wagner (1972), Lesis (1974), Prieto and Rutherford (1977), and Algozzine (1977). Prieto and Rutherford describe an assessment technique in which the child's niche or role in the ecosystem of the class is evaluated as either positive or negative and then further evaluated in terms of positive and negative roles the child is playing in relation to the various interactions that take place. The ecological assessment approach leads to intervention approaches in which the environmental factors are as likely possibilities for change as the child himself.

A survey by Hirshoren (1970) of State directors of special education asked them to estimate the percentage of children placed in special programs for the emotionally disturbed who were returned to regular classes each year. Although one-third of the State directors did not estimate, those who did ranged from 5 to 90%, a phenomenon which the authors found "difficult to understand." Studies by Glauin (1972) on the persistence of emotional problems have indicated that 55 to 82% of children identified as disturbed who did not receive any treatment were not so identified 4 years later. These studies are instructive and

typical of the literature where there is an absence of specific information regarding the past use and benefits of any special programs for this population. The lack of clarity as to precise definitions of who is and who isn't seriously emotionally disturbed contributes to the methodological problems in using and assessing various program options. Clearly, however, the range of severity associated with this population means that all of the placement options usually placed on the special education continuum will be used for these children.

Orthopedically Impaired and Other Health Impaired

Summary of the Literature Review

Throughout the literature in these two categories, three major themes are apparent. First, the two categories also included as distinct in Public Law 94-142 are usually treated as one. This may be explained by the second observation, which is that these two categories are very similar in the fact that they are highly etiologically based and have a distinct medical flavor. This is reinforced by an emphasis on early identification and medical attention. The final major theme is also common to the two categories in that the literature raises substantial questions about the educational relevance of the presence of medical problems.

Despite the latter comment, there is recognition within the literature that some of these children, usually as a result of secondary difficulties as opposed to the medical problem itself, may have need for a special education. When such a situation is suspected, it is emphasized, an evaluation sufficient to design an appropriate program should be conducted. Special emphasis is placed on altering the physical environments or regular classes to accommodate these children rather than using special programs unnecessarily.

Of note is that some attention is given in the literature in these categories to pregnant students.

Definitions

From this review of the definitional literature, it appears that these two categories, the orthopedically impaired and other health impaired, are the most medically based and are the most heterogeneous of the usually used categories of exceptionality. It is equally clear that they are usually treated as one category by the literature. Equally important is the suggestion throughout the literature that these may also be the least educationally useful categories.

The Federal definitions are:

> *Orthopedically impaired* means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.) and impairments from other causes (e.g., fractures or burns which cause contractures, amputation, cerebral palsy, etc.).
>
> *Other health impaired* means limited strength, vitality, or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis,

rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

Because of the heterogeneity of the population and its medical basis, definitions in the literature are rare. Wilson (1973) states:

> They have been described as crippled, orthopedically handicapped, chronically ill, delicate, homebound, hospitalized, and physically impaired, or said to have low vitality, motor disabilities, or neurological impairments. The only escape from this dilemma is to substitute delimitation for definition.

A BEH sponsored special study institute dealing with professional preparation for educators of crippled children produced the following definition of the Crippled and Other Health Impaired (COHI) (1970):

> The COHI population appears to be seen in three dimensions: physical definition, functional problems, and programmatic modifications. The population is comprised of those children and adults who as a result of permanent, temporary, or intermittent medical disabilities require modifications in curriculum and instructional strategies. Frequent separation from family and a lack of adequate parental guidance contribute to secondary emotional problems of the COHI population. The child's physical limitations are often the basis of functional retardation as well as sensory, perceptual, and conceptual deficits. The development of realistic expectation levels requires the identification of additional and unique instructional materials, equipment, and strategies for evaluation.

In approaching these categories the literature indicates that it is important to distinguish between the medically based disability which may not have direct educational relevance and the secondary effects of the disability which may have adverse educational impact. Hewett (1977) discusses this situation by stating that:

> Chronically ill children such as those with asthma or a heart condition may be indistinguishable from normal children intellectually, but their lowered vitality, inability to participate in strenuous school activities, and frequent absences may greatly interfere with their education. . . . In fact, any health condition that alters the child' mobility, vitality, and alertness and interferes with his or her participation in a normal school program is of concern to the field of special education.

The far-reaching effects of physical illness on a child's development are also discussed by Travis (1976):

> What illness means to a child at the time it occurs, and the impression it leaves on his personality, are largely affected by his stage of development or, in other words, are age-related. . . . Serious disruption at any one stage averts normal progression and creates a distortion in the personality. We are concerned with the ways illness disrupts the "basic tasks" of childhood. . . . The schoolchild achieves his goal (development of industrious habits) through satisfactory competition with peers and winning recognition for his successes. The chronically ill child particularly needs to develop industrious habits, since he will not be able to compete physically.

Wilson (1973) provides some refinement of this concept by stressing the fact that the child with neuromotor, crippling, or other health disability may not be educationally handicapped unless certain factors are present:

> The disability is severe and permanent and will greatly influence future vocational and social competency; lack of normal experiences, absences from school, and the necessity of functioning at reduced speed may extend the amount of time required to complete prescribed courses; and intellectual capacities and learning deficits may require the use of special methods and materials.

Because of the medical nature of characteristics of this category, individuals face considerably different educational restraints than other categories of exceptionality. Hewett (1977), in describing a cerebral palsied student in a college class, points out that "the educational problems he faced were in many ways more the result of mobility limitations in getting to school, walking, climbing stairs, and writing than other factors." Wilson (1973) makes the same point by stating that:

> A large majority of the children who have the disabilities described . . . are not classified as exceptional for education. They are able to learn as other children learn, and their condition is not handicapping in a classroom when adjustments for individual problems are made in facilities, equipment, and materials. Some of them may need additional assistance, such as speech or physical therapy, and perhaps augmented psychological and social services.

The inappropriateness of medical labels is further expressed by Connor (1975):

> There is clear dissatisfaction with the apparent assumption that all disabled children in any one category function in exactly the same way. Calling a child cerebral palsied or blind provides little information about his functional levels. Such terms do little more than call

> attention to the fact that he is subject to some deviation from what is considered normal. The extent to which this deviation interferes with learning or social behavior or whether the child can respond to therapy, use prostheses, or perform "activities of daily living" is not reflected in the label. Yet all too often, it is the child's diagnostic label that affects educational placement and the specific qualifications of his teacher.

Of note is that to some degree the literature addressing these categories includes consideration of pregnant students (Wilson, 1973; Karnes, 1965; Wolinsky, 1970). In some State law, inclusion of these students within the category of orthopedically impaired and other health impaired is intended to make these students eligible for special education.

Identification, Evaluation, and Placement

The literature indicates that the identification of special health problems or orthopedic impairments is usually done initially by the family, though the teacher's role in referring a child suspected of having a health impairment is a significant one. Not unexpectedly, the literature also reports that the early identification and treatment of medical problems can do much to prevent secondary psychosocial effects. Valletutti (1975) said that:

> The early diagnosis of medical problems offers many advantages in that early diagnosis can result in prompt treatment and the increased probability of remediation and/or cure. It also helps to prevent further physical deterioration and permanent damage to the involved organs. Early correction of physical problems will minimize the effects of a pathologic condition on learning.

L'Abate and Curtis (1975) describe the direction of the literature when they report that for children in these two closely related categories early identification and medical treatment are appropriate and result in the fewest possible learning deficits. Prevalence estimates for these combined categories range from 0.36% (Dunn, 1973) to 0.44% (Friedman and MacQueen, 1971), 2.1% (U.S. Department of Health, Education, and Welfare, 1971) and 0.5% (Bureau of Education for the Handicapped, 1975). Wilson (1973) reports that there is some evidence that the number of children with physical impairments is increasing. The National Society for Crippled Children and Adults (1967) reports that the total number of crippled children served through Federal and State programs increased 87% between 1950 and 1963. Wilson also points out the discrepancy between figures based on the presence of these children in educational settings and the 2.1% prevalence figure of the U.S. Public Health Service. These figures, Wilson explains, underscore the fact that most children with physical disorders have medical but not necessarily educationally relevant disabilities.

Recognizing the heterogeneity of the orthopedically impaired has led Clements and Hicks (1974) to the conclusion that assessment procedures cannot be specifically geared to this population. They state:

> The search for an assessment packet specific to children with physical and neurologic impairment will be unproductive, since the diversity of learning and behavior symptoms may manifest differently in different children and at different ages. The selection of useful and appropriate tests is determined through a reasoning process on the part of the diagnostician, taking into account such factors as the kind of physical or neurologic impairment, the degree of impairment, the age of the child, chief concerns, major symptoms, data from other sources, objectives of the diagnosis, availability of recommended services, and placement possibilities.

It seems generally clear that the same evaluative instruments and techniques should be used with the physically handicapped as are used with other children, making only the necessary adjustments in testing procedures, facilities, and interpretation suggested by the specific disability.

Specifically, Clements and Hicks (1974) suggest such modifications as shortening testing sessions if the child fatigues quickly, omitting test items that require physical skills the child does not have, or varying the manner of response if the child has a severe speech involvement. They warn, however, about guarding against too liberal interpretation of testing results.

As with all disability categories, the literature is replete with the necessity for conducting evaluations that are sufficiently comprehensive to obtain the information needed to design an appropriate program. Connor (1975), for example, stresses the importance of determining all the significant variables associated with a physical disability, including personality adjustment, the possible presence of an abnormal parent-child relationship, the lack of usual childhood experiences, and the side effects of medication.

The literature is well represented by the view that the health impaired child be maintained in the regular classroom receiving whatever resource help is necessary due to absences (Connor, 1975; Wilson, 1973; Hewett, 1977; Gearhart and Weishahn, 1976). Travis (1976), on the other hand, points out some possible advantages of the special school or class:

> Among the major advantages of special schools or classes are the bus transportation, special attendants, physical arrangements, and high degree of individualization possible. Children with muscular dystrophy usually attend special schools even before they become confined to wheelchairs, because of the ease with which they fall down if brushed against or pushed. Not all children in wheelchairs but most children with muscular dystrophy, spina

> bifida, and spinal cord injuries attend special schools. Those with bladder and bowel incontinence find it easier to diaper themselves if they are among a group that does the same thing. . . . Children with arthritis, hemophilia, and sickle cell anemia may attend special schools during flare-ups of joint damage in the lower extremities and return to regular schools as the condition subsides. . . . Home teachers are needed by children with acute flare-ups of arthritis or nephrosis and in preterminal stages of leukemia and cystic fibrosis.

Wald (1970), however, seems to present a balance between these positions that is consistent with the thrust of Public Law 94-142. She points out that a large proportion of this population can and should be made part of the regular classes. For some children, restrictions imposed by architectural barriers and special transportation needs too often limit opportunities for proper educational placement. Wald states: "Many of the problems faced by this subgroup of youngsters appear to reflect difficulties inherent in administrative planning rather than in educational programs." Wald makes clear, however, that children with severe and multiple handicaps including educational handicaps and the effects of restricted experiential background need special programs. Educational needs of this population, however, are far too diverse for a single instructional program. It is critical that educational placement decision follow development of individual educational programs.

Consideration of placement decisions for the health impaired or physically handicapped child requires that both the child's medical and educational needs be met.

Deaf-Blind and Multihandicapped

Summary of the Literature Review

Notable in the literature was the emphasis on the absence of a well understood or accepted definition of the multi-handicapped. This is not equally true for the deaf-blind, who are considered in this report as a subpopulation of the multi-handicapped. It was indicated that the somewhat more specific role of the Federal government regarding the deaf-blind may account for this difference. As a result of the "looseness" of the multi-handicapped definition, coupled with nonexistent standardized evaluation techniques, the true nature of this population cannot be described. Frequently reported in the literature is that many more children than anticipated possess multiple handicaps, but they are usually of less severity than those afflicting children included under the Federal definitions. Emphasis was also placed on the need for early identification and intervention, with the latter intimately related to the child's evaluation. Also recognized is that while these children raise similar placement problems to those of other low-incidence populations, their usual instructional setting requires individual staffing.

Definitions

According to the 1976 Annual Report of the National Advisory Committee on the Handicapped, 60% of the children in the deaf-blind and multi-handicapped categories are not receiving services. It appears that most of those who are unserved are in the multi-handicapped category, since BEH has for some years been funding a successful regional network of services to deaf-blind children. Although the deaf-blind are multi-handicapped, the Federal definitions distinguish these two categories:

> *Deaf-blind* means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind children.
>
> *Multi-handicapped* means concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.

It is important to recognize that both of these definitions are educationally oriented, in that they are not concerned with etiology, medical diagnosis, acuity levels, decibel loss, or functioning outside the educational setting. The deaf-blind definition contained within the regulations is essentially the same as that developed by BEH in 1969 for the Regional Centers for Deaf-Blind Children (Dantona,

1974). This definition apparently originated with Wolf (1965) who modified the original deaf-blind definition developed by the National Study Committee on the Education of Deaf-Blind Children in 1953-54.

The review of the literature makes clear that, unlike the situation with the deaf-blind, there are widely divergent views on the definition of multi-handicapped children. Wilson (1973) considers the multi-handicapped child to be one who is suffering from "disabling" conditions. Kirk (1972) uses the broad phrase "other combinations of divergencies from the normal." Wolf's (1965) work is similar to the educationally oriented Public Law 94-142 definition of the multi-handicapped. He views the multi-handicapped child as qualitatively different from children with a single handicapping condition. Thus, if the child can be served in a program for children with one condition he is not multi-handicapped.

Walker (1975), in a survey of 96 operating programs for the deaf-blind, the multi-handicapped, or both, studied the types of definitions actually used for these programs. It was found that about three-fourths of these programs had official definitions in writing of the target population, while one-fourth either were operating without an official definition or had never put the operational definition into writing. Further they found that 45% of the deaf-blind programs defined their population according to BEH guidelines while the remainder were State determined, locally determined, or were obtained from another source. Forty-seven percent of just the multi-handicapped programs served children according to State definitions. This is consistent with the fact that deaf-blind programs are usually federally supported while multi-handicapped programs are primarily funded at the State and local governmental levels.

Walker and his colleagues also found a great variety of individual interpretation of the different definitions in use. They wrote that they:

> . . . fell primarily into the categories of legal or functional interpretation. Legal definitions for blindness were stated in terms of actual measured acuity and visual field, while those for deafness were stated in terms of decibel loss. Functional definitions were stated as degree of use of vision and hearing. At times, hard-to-test children (particularly in state schools) were assumed to be deaf-blind until they demonstrated otherwise, and thus could be included in the services. Still another variation was the inclusion of perceptual problems, in either vision or in hearing. The distinction between these two kinds of definitions, the legal and the functional, is extremely important, as (1) it defines the parameters within which children are accepted into programs, and (2) may serve to hinder communication between programs.

The wide range of interpretations of the Federal definition of deaf-blind is significant. The use of both medical (what Walker calls "legal") and functional interpretations could result in differing

populations being served under the same category. The assumption that hard-to-test children are deaf-blind and the inclusion of children with perceptual problems could also contribute to significant alterations in the numbers of students eligible under these programs.

Walker's study, as previously mentioned, also found that various types of definitions were applied to the multi-handicapped. Specifically, it was found that:

> In addition to definitions listing the presence of types of handicapping conditions, there were definitions based primarily on needs. Multiply handicapped was thus defined as:
>
> (1) two handicaps, each requiring special education services,
> (2) handicaps requiring a combination of technologies, and
> (3) handicaps requiring extraordinary modification of methods.
>
> Thus, while the term deaf-blind, as used by programs serving deaf-blind, differs primarily in interpretation, the term multiply handicapped has a wide variety of meanings. The commonality between all of these definitions seems to be that, because of a combination of handicaps, extraordinary services may be needed.

Of particular interest is Walker's finding that the major commonality most frequently observed among these definitions was the need for extraordinary services, which closely approximates the Federal definition. Walker also noted that several programs extended the definition along the dimension of severity and included impairments that were not necessarily multiple, but that were severe, such as severe and profound retardation. This seems to be an accurate reflection of a major portion of the literature, which does not distinguish between the multi-handicapped and the severely and profoundly retarded because of the frequency of concomitant problems that often accompany profound retardation. When the term *severely handicapped* or close variations are used in the literature they usually apply to any child with severe problems, whether caused by multiple or by a single severe handicapping condition.

Of importance as well is that the simultaneous existence of two major handicaps has debilitating effects on an individual far beyond the consequences of one handicap plus the consequences of the other. Hart (1969) has stated:

> The two handicaps do not function as addends but as multipliers. When the child has the two together, we can no longer think of separate categories but of accumulative problems.

Further, the literature makes clear the absence of a rationale for attempting to assign one disability priority (Wolf, 1965; Kishi, 1974; Anderson, et al., 1975). Kishi says, "The practice tends to overlook the needs of the whole child in an attempt to pigeonhole the very

complex and multidimensional needs of a multi-handicapped child into the present framework of singular handicaps." Further, Kishi sees no instructional function in the multi-handicapped category since it includes children whose intra-group and intra-individual characteristics are numerous and varied. These same implications are cogently expressed by Kirk (1972):

> Exceptional children at present are grouped under categories or umbrellas such as deaf, hard of hearing, mentally retarded, and so on. The multi-handicapped approach implies the erection of slightly larger umbrellas, some to cover two existing umbrellas, some to cover three, and so on. As teachers have identified exclusively with the single umbrella categories, we have the nightmarish possibility of new identities with the overlapping umbrellas which will greatly compound our difficulties.

Identification, Evaluation, and Placement

Brewer and Kakalik (1974) reported that in 1973 there were 4,414 deaf-blind children between the ages of 3 and 18 in the United States. They commented that these data are thought to be thorough due to the work of the Regional Centers for Deaf-Blind Children. These same authors also suggest that there remain many unidentified deaf-blind children under the age of 3. They indicate that this can be demonstrated by the fact that approximately 140 deaf-blind children are born per year, even when figures are not inflated by a rubella epidemic or a similar causative phenomenon. Yet only 60 identified deaf-blind children under the age of 2 years have been reported.

Despite the need for improved efforts in infant identification of the deaf-blind, this category probably has the greatest percentage of the actual population identified of any of the disability areas. This is in marked contrast with the status of the multi-handicapped. Kishi (1974) suggests that there are anywhere from 15,000 to 36,000 multi-handicapped children, but at the same time notes, as previously discussed, the lack of an accepted operational definition on which to base any prevalence estimate. The literature is laced with reports of the existence of a variety of estimates of many types of multi-handicapped children. Kirk (1972) cites numerous studies showing the high incidence of mental retardation in cerebral palsied children and cites one figure of 58.6%. Kodman (1958) in a summary of studies of hearing loss in the mentally retarded reports a prevalence of 13% to 49%. Leenhouts (1969) found that 15% of the school-aged deaf were also mentally retarded. A study by the American Foundation for the Blind (1967) found mental retardation in 80% of the multi-handicapped blind and also that 40% of these children possessed three major handicaps. Similarly, Wolf (1969) found that 65% of the mentally retarded-blind had a third major disability. Vernon (1970) noted that there are only a few deaf-cerebral palsied children who are free from additional handicaps. Wishik (1964), in a study of prevalence of handicapped children in Georgia, found that each child had an average of 2.2 disabilities and that 71% of the children had more than 1 disability. One

conclusion from Wishik's work, if the criteria used for classifying children as multi-handicapped are accepted, is that children with multiple handicaps are in fact more usual than children with single handicaps, even children originally identified as having only one handicap.

The literature reports evidence indicating that the number of multi-handicapped children in the United States is increasing (Dunn, 1973; Hewett, 1977; Kishi, 1974; Lowenfeld, 1968). This is sometimes explained by these authors as being due to improved survival rates of neonates with severe problems. This is frequently mentioned in the literature to emphasize the need to identify these children at birth or as soon after as possible.

The complexities of assessing the educational needs of deaf-blind and other multi-handicapped children are frequently discussed in the literature. Kishi (1974) points out that norm-referenced tests are rarely appropriate for this population. Specifically identified as problems are items on the Wechsler Intelligence Scale for Children (WISC) that children with motor problems or poor small muscle coordination are unable to perform. Though the Stanford-Binet has been standardized on a blind population, the presence of additional handicaps often makes these scores invalid. Kishi quotes Haeusserman (1952) in noting the types of problems likely to affect the testing of a multi-handicapped cerebral palsied child:

> (1) immaturity, (2) infantilization, (3) negativism, (4) extreme deprivation of experiences, (5) extreme concretization, (6) retardation, (7) visual difficulties, (8) inaccessibility to human speech, (9) delayed responses, and (10) behavior deviations.

Hewett (1977) also stresses that the lack of reliable and valid test instruments standardized on children with multiple impairments makes meaningful and accurate assessment impossible. Further, he says, use of concepts and scores such as mental age and IQ seems to have limited value in evaluating the capacity of these children. Instead of traditional norm-referenced types of assessment, the literature concludes that assessment of the multi-handicapped should be behavioral, criterion based, and directly related to skills that can be taught. Leland (1972), for example, states that assessment of severely retarded children (probably multi-handicapped):

> Should be based on the generalized impressions of what the child is doing in those specific activities essential to his survival in a particular setting, rather than an abstract estimation of his ability to do things in no way related to that survival.

There is in the literature agreement that appropriate assessment must be intimately linked with instruction. Yet there is need for establishment of procedures to guide practitioners in selecting instructional objectives that appropriately relate to child capabilities (Baldwin, 1976; Haring, 1977; Kauffman and Snell, 1977).

According to BEH figures for 1975, the deaf-blind and other multihandicapped children constitute 0.06% of the school age population. This means that for every 10,000 children in a school district there will be about 6 children in this category.

As is well recognized, special problems in delivery systems exist for such low incidence groups. Sontag, Burke, and York (1973) and Sherr (1976) compare advantages and disadvantages of clustering severely handicapped students in one location of a school district or a group of school districts versus dispersing such children throughout a system. Advantages of the cluster approach include improved inservice training capabilities through easier communication among staff, simpler provision of related services and particularly those that are medical, and more efficient curriculum development. Advantages of dispersing such students throughout the school district include greater contact with nonhandicapped or mildly handicapped students and proximity to the children's homes. It is likely, however, that for many of these children, an appropriate education will be provided in a highly intensive setting, often including residential facilities. Of the utmost importance, as indicated in the literature, is that quite often the unique learning needs of these children are so individualized that group programming cannot as a rule be the primary vehicle for delivering instruction.

Identification, Evaluation, and Placement

Summary of the Literature Review

The three processes of identification, evaluation, and placement are seen throughout the literature as a logical and, if implemented properly, sound progression for the education of handicapped children. Most specifically and universally advocated is the relationship between conducting evaluation activities and linking them to program planning decisions specified in the Individualized Education Program (IEP). This, of course, leads to the program placement decision.

The identification process primarily involves the referral of suspect children and the selection of suspect children via the use of various screening techniques. Throughout the literature, there is an emphasis upon the early identification of handicapped children and especially those with severe problems. To some degree, there is concern that early identification of mildly handicapped children may be a mixed blessing because of the possible changes in expectations for the child on the part of the significant adults in the child's life. An item of some controversy discussed in the literature focuses on the role of the regular class teacher in identification. Pointed out are teacher differences in perceptions of when a child is in need of evaluation, leading to an uneven selection system. Others in the literature advocate the use of specifically trained personnel for this function. A major difficulty associated with referral is the excessive delay that sometimes occurs between the time of referral and the conducting of an evaluation, time that may be considered lost from the instructional life of the child.

Three major themes are threaded through the literature regarding evaluation. The first centers upon the evaluation procedures themselves and particularly the instruments that are used. Widely discussed are alternatives to traditional evaluation activities, with extensive agreement upon the need for various types and categories of information. Aside from this concern, there is also contained within the literature a presentation of various constructs underlying evaluation. These include the ecological or systems approach, assessment of learning potential approach, behavioral assessment, use of norm- and criterion-reference measures, and the use of systematic observation. Finally, there are extensive writings on the subject of nondiscriminatory evaluation which focus on the weaknesses of various instruments and ways of correcting them for cultural and language factors. A second theme in this area is the labeling issue and all that surrounds it.

Of importance, however, is the apparent growing recognition that there are two purposes for evaluation, one to certify that a child is handicapped and the other to obtain information to design a program. It is the latter fact that is the third theme found in this literature review. Numerous authors emphasize the fact that the evaluation should be inextricably related to the design of the individual child's program.

It is for this reason that much emphasis is placed upon the presentation of evaluation findings in educational terms so that they can be used by educators.

The literature pertaining to placement emphasizes the key role of the IEP in the placement process. Of special emphasis is that the placement of children should no longer be dependent upon available placement options, but rather children should be the recipients of programs designed to meet their individual needs. Equally important is the frequently offered suggestion that this process be studded with flexibility to meet individual children's needs as they change over time. These basic premises recognize the increasingly closer relationship between special and regular education. Since placement committees are recognized as a basic functioning element in the child placement process, emphasis is placed in the literature on making these groups work effectively, especially from the point of view of assembling and appropriately using the information previously collected about each child. The functioning of the team is seen as being closely related to growing accountability of school personnel, which is seen as one effect of the IEP.

The systematic identification, evaluation, and placement of all handicapped children in need of special education is clearly a major thrust of Public Law 94-142. These processes are designed to select individual children who may be in need of special assistance, to verify, determine, and describe their special needs if indeed they exist, and finally to provide appropriate programs to meet the special needs. Despite repeated attempts to isolate these processes, their highly interrelated nature makes it more advantageous to describe them essentially in the same section yet somewhat sequentially since, to some degree, that is the manner in which they occur.

Identification

The term *identification* is used throughout this report to mean those activities that lead to the recognition that a child has or may have a handicapping condition. Identification is the first step in the process in which diagnostic assessment is designed from the start and continues with monitoring through reevaluation and reviews of a student's educational progress. Identification is the entry step in which the child first comes to the attention of professionals responsible for assuring that the child is then channeled toward appropriate evaluation, placement, and instruction. Identification itself does not include either evaluation or placement. Basically screening and referral procedures are the two mechanisms through which children are identified as possibly needing special services.

Screening

Hayden and Edgar (1977) define screening as follows:

> Screening can be defined as the testing of a large population in order to identify those individuals who are most

likely to manifest a handicap. It is a formal procedure for identifying people with suspected handicapping conditions. Screening is not--or should not be--used to label an individual; nor is it used to prepare specific objectives for intervention.

Screening activities are carried on within the public school framework of States and by other service providers such as pediatricians, well baby clinics, and public health services. All States require some type of screening, usually for vision and hearing problems, at the time of school entrance, whether kindergarten or first grade. Many require periodic screenings throughout the schooling process. There is some evidence that the most efficient and comprehensive screening for nonsensory handicaps within the school setting can be done by the teacher. Leziak (1976) points out direct advantages of teacher screening with a battery of formal and informal measures:

> If one accepts the point of view that the identification and educational classification of children is important but is secondary to, and for the purposes of, facilitating educational modifications within a particular environment, a number of identification and programming uses appear feasible with the proposed battery. . . . Programming for individual teachers also is feasible by utilizing the data derived from the cognitive behavioral, visual motor and auditory measures. From the point of view of the teachers, feedback after the project indicated that they felt more inclined to utilize test results to modify classroom instruction when they were involved directly in the data gathering process. Thus, teacher involvement in the battery administration may result in a more positive reception of recommendations from a school psychologist.

Leziak sees the teacher's involvement as leading directly to changes in educational programming and to greater cooperation with recommendations of a full psychological evaluation. Kakalik (1973), on the other hand, notes:

> Much of the identification that does occur is done informally by parents, schoolteachers, and others not specially trained to recognize handicaps. . . . Without adequately trained, certified, and funded screening personnel, misidentification (errors of both omission and commission) can be distressingly frequent. . . . The need for certification of those actually doing preschool aural and visual screening has been repeatedly noted.

Structured guidelines and a specific battery of simple tests would possibly combine the advantages of efficiency and direct programming relevance found in teacher screening programs without the disadvantages noted by Kakalik. Magliocca (1977) reports on an objective screening procedure appropriate for teacher use to identify learning handicaps in young children through a frequency sampling technique of academic

behavior. Screening for sensory handicaps probably needs to be reserved to professionals or paraprofessionals specifically trained in the screening procedures.

In contrast, a paper by the Education Policy Research Institute (1976) suggests the use of volunteers as an alternative for reducing costs and increasing manpower in the identification effort. It is recommended that the benefits and drawbacks of using volunteers in this role and their training needs be examined. Kakalik (1975) commends the Michigan school vision screening program as a model appropriate for replication in other areas. Noted are the high standards of personnel (certified "vision technicians") doing the testing, sound administration, and persistent follow-up procedures resulting in confirmed true positives averaging 90%.

Outside the public school framework screening activities have been focused in the health delivery system. Regular pediatric visits and well baby clinics would appear to be the natural place for such screening during the years from birth to age 5. Brubeck (1975) points out, however, that the 25 million poor or near poor children are unlikely to receive preventive medical care (including screening) while being 7 times more likely than the more affluent to have visual impairments, 6 times more likely to have hearing defects, 5 times more likely to be mentally ill, and much more likely to be mentally retarded due to preventable conditions such as lead poisoning. The concern for the "missing cohort," aged 0 to 5, is summarized in a recent statement by the American Academy of Pediatrics (1971):

> At present there is a serious obstacle to identification of health problems in the preschool child; only a small section of the child population receives continuous health care and supervision from infancy to school age. Early identification of handicap among those children who receive health care from either the private or public sectors of the delivery of health care can be furthered by emphasizing the need for comprehensive screening procedures. But early identification of physical handicaps among those children who do not receive health supervision during infancy and childhood poses almost unsolvable problems. In our society children are not brought together regularly in groups until school age, and therefore it is currently almost impossible to conduct screening examinations on this population at an early age.

The main effort to provide comprehensive screening services to the economically disadvantaged is the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program for the estimated 13 million children (1.3 million under the age of 6) under the Medicaid program. This program is funded under the Title XIX Amendment to the Social Security Act of 1967. Van Doornick (1975) points out the guidelines for implementing the program were not issued until 1971, almost 4 years later. A statement by the National Society for the Prevention of Blindness (1975) notes inadequacies of the program as follows:

> This program is designed to bring comprehensive health services to some 13 million underprivileged children. In the six years since the program was initiated less than 3 million children have received the mandated services according to program statistics. As of July 1974, a total of 1.5 million children had received medical examinations but almost none had received follow-up treatment.

The guidelines for the program include a master schedule for screening from birth to 21 years of age. Recommendations include 14 medical and developmental interviews, 13 medical examinations, 6 dental care reviews, 6 visual acuity tests (beginning at age 3 or 4), 6 hearing audiometric tests (beginning at ages 3 or 4), 4 school progress reviews, 3 screening tests of psychomotor development during the preschool years, and 4 screenings for undue lead absorption (preschool years). The potential of the program is discussed by Dwight and Weikel (1974) who report that in 2 1/2 years 2 million Medicaid children were screened. About half of these required further diagnosis and treatment. One-fourth needed dental care; one-tenth had eye problems; and 3 of every 100 had hearing deficiencies. A review by Martz (1976) of the EPSDT Demonstration Projects Office described findings similar to those above along with a high incidence of developmental lag.

A major deficiency of the projects Martz described was that many children with recognized problems were lost track of following referral to the provider; case monitoring was a major deficiency with referral as the weakest link. Her recommendations included collaboration with special education departments of schools and other community agencies and services, and more careful case monitoring. The report (1973) notes the inadequacies of EPSDT as follows:

> It has been difficult, however, to elicit compliance and full implementation of these (EPSDT) provisions from the states. Data accounting for total numbers of people screened, referral rates, disease incidence, and follow-up measures undertaken are beginning to be collected, but the results are incomplete. . . . Thus, the present federal role with respect to identification programs is one of funding and research, but not operation or strong control.

The potential (unfulfilled as yet) of this program is pointed out by Tytla (1976), medical advisor to EPSDT:

> We must provide a periodic comprehensive assessment and treatment program for this group. Children must be given a complete history and physical which includes developmental, immunization, vision, hearing, and dental assessments, and also appropriate laboratory procedures. All testing can be done "at one sitting," or through separate screening programs such as Head Start, vision screening programs in schools, or by a private practitioner. What we do insist on is that one provider (whether it be a clinic

> physician or a nurse) be responsible for coordinating assessment results on each child. . . . Any abnormalities detected must be treated.

It appears that with proper case monitoring and cooperation with local special education and other early childhood and family focused programs, the EPSDT could become the identification entry point for a sizable population of children in need of a variety of special services.

Referral Procedures

Referral procedures, usually teacher referral, provide an alternative identification route. Whereas screening procedures are designed to select out a group of high risk children from the total population, referral procedures are intended to be a means whereby an individual child is singled out for evaluation. Johnson (1976) describes how the system typically works in six steps: (1) submission by the teacher of a referral form requesting further testing, (2) transmittal of the teacher referral for testing from the school principal to the school psychologist or other examiner, (3) the psychological evaluation, (4) referral to the special education department for special placement, (5) review by the placement team of the validity of the placement recommendation, and (6) special class placement or placement on an appropriate waiting list. Johnson identifies the following problems with this common linear referral and placement system:

> The modal response is still to establish and maintain systems which (a) have linear decision making processes, (b) contribute to excessive labeling and classification of students, (c) reinforce the teacher in his/her expectation that he/she cannot teach the handicapped, (d) stimulate referrals to specialized settings and diminish the responsiveness and coping power of the regular system, (e) result in a static programming condition for the student, (f) provide for little parent input and involvement, (g) neglect to provide for periodic reevaluations and (h) diffuse accountability.

The lack of accountability and the slow rate of the usual process are two major drawbacks of the referral procedure. Magliocca (1977) points out that months usually pass before the teacher knows the child well enough or gets around to even initiating the referral process. In addition, some children are less likely to be referred by some teachers than others despite problems of equal severity. Acting-out children are more likely to be referred than withdrawn children, boys are more likely to be referred than girls, and disadvantaged children are more likely to be referred than middle class children. Ginn (1976) reports on several studies showing that teachers fail to refer about 60% of pupils who are in need of speech and language services.

Several solutions have been offered for these referral problems. Gearhart and Weishahn (1976) recommend structuring the referral form:

> In addition to being of value as the starting point for possible specialized assistance, at times referral forms, screening forms, or scales may be of value to the teacher as a structure through which the child's strengths and weaknesses may be systematically summarized and analyzed . . . a teacher may discover a child is really quite normal except for perhaps one personality component.

Other guidelines for use of the referral form include phrasing the problem in terms of a question or questions the teacher desires to have answered (Dyer, 1974) and referring any child whose functioning is not improving given the present level of education service (Lowenbraun, 1976).

Johnson (1976) makes several recommendations to speed the referral process and maximize accountability at the teacher and local school level. He proposes that response time between initial teacher referral and completion of necessary assessments be no more than 2 weeks, and that time between completion of assessment and delivery of services be no more than 2 weeks. He also recommends that most referral and placement decisions be at the local school level, a procedure used in Minneapolis. It is thought that with such a procedure the energy of teacher and principal is focused on individual programming at the building level rather than on attempts to get the student tested and/or placed in some program or service external to the referring school. Referrals for placements out of the local school would be considered only when appropriate building-based services are unavailable.

Early Identification of Handicapped Children

Identification can occur at birth for children with certain kinds of handicapping conditions. Physical abnormalities such as microcephaly or cleft palate and usually Down's Syndrome can be identified at birth. Parmelee and Michaelis (1971) list other behaviors and characteristics obvious during the first days of life that indicate that the child is at high risk and needs further extensive assessment. Many other conditions such as hearing loss may be identified during the preschool years.

The basic rationale for early identification and intervention with young handicapped children is well stated by DeWeerd (1977):

> There is evidence that programs providing early educational and therapeutic programming to meet the needs of young handicapped children and their families are reducing the number of children who will need intensive or long term help. The importance of reaching handicapped children early and working to help them reach their full potential cannot be overemphasized. With early help, the sooner the better, these children can often function at higher levels than had been dreamed possible in prior years.

Among the other authors subscribing to this principle are Satz and Ross (1973), Satz and Friel (1974), DeHirsch et al. (1966), and Haring and

Bateman (1977). The literature is consistent in that children with those disabilities that lend themselves to the medical model--sensory disability, severe neurological involvement (cerebral palsy), or severe mental retardation (including Down's Syndrome) are especially helped by early identification and intensive intervention programs. Some disagreement exists, however, as to whether early identification of mildly handicapped children is always effective or desirable. Keogh and Becker (1973), for example, point to the dangers of applying the medical model to the psychological and educational realm:

> When early identification efforts are applied to exceptionalities of more educational or psychological definition, however, some subtle differences from the physical disability model must be considered. Basic to the question is this: When we seek to identify preschool or kindergarten children whom we fear may become learning failures, we are, in fact, hypothesizing rather than confirming. That is, the conditions which we view as atypical, namely, learning disability and failure in school, have not yet developed. Our concerns are that these conditions will develop. Yet, children who have not been exposed to a reading program cannot really be said to have reading problems; children who have not participated in a first grade program cannot be classified as first grade failures.

It appears then that many early childhood programs for the mildly handicapped are intended to serve a preventive rather than a treatment purpose. Negative effects of labeling and expectancy changes of parents and teachers must be balanced against the advantages of early intervention programs. Wolfensberger (1965) cautions:

> Early diagnosis is desirable when it leads to prevention, early treatment, or constructive counseling; it is irrelevant if it is purely academic and does not change the course of events; it is harmful if, in balance, child or family reap more disadvantages than benefits.

Much of preschool identification is currently being done informally. Fellendorf and Harrow (1970) report that, for children in the 0-6 age range, initial identification of hearing impairment is made by the parents in 70% of the cases, followed by grandparents and relatives at 16%, then physicians at 7%, friends at 6%, and teachers at 2%. Physicians and friends seem equally competent at identifying early hearing handicaps. An important perspective regarding identification and physician behavior is reported by Schlesinger (1972) who found that parental efforts at obtaining medical diagnosis are often frustrated and states:

> Parental anxiety is often compounded by professional denial of the diagnosis or by false reassurance. One-third of the parents interviewed by Meadow (1968) and seen by Schlesinger . . . indicate that the first physician consulted denied the suspected deafness. Sixty percent of the parents in Meadow's

study consulted four or more physicians prior to receiving a definite, accurate diagnosis.

Further, Kakalik (1973) notes that physicians generally and pediatricians particularly are not well and thoroughly trained to detect early childhood hearing and vision disorders.

Finally, Kakalik (1973), after conducting a review of visual screening and hearing screening tests, reported a lack of validity data, difficulties of testing, and a lack of standardization and offered these recommendations:

1. Implement mass screening programs to detect aural and visual handicaps in all young school-age children, with program mechanisms to insure quality screening techniques, personnel, and followup; and

2. Since techniques for quality mass screening at birth for hearing and vision handicaps need further development, conduct thorough evaluations of various options for implementing identification programs for 2- to 3-year-old children, leading to the implementation of programs designed to reach 2-year-old children. Promising program options include a "high risk" registry established at birth, with followup examinations; and a type of "free check-up" mechanism whereby pediatricians or other service personnel would be reimbursed through National Health Insurance or some other program for each 2-year-old child they screen and report on to a health agency or other prescribed government agency.

Kakalik (1973) raises an important concept regarding the relationship between evaluation and service delivery that, while heavily focused on young children, applies to all ages. He suggests that failure to identify handicapped children may be related to a general inadequacy of resources to serve all the children needing services: "If there were better and more complete identification of disabled children, there would be some undeniable obligation to do something for those who are discovered." He offers a model showing the nine alternatives for allocating special education resources, from decreasing both identification and treatment resources (option a), through increasing identification resources while decreasing treatment resources (option g), and decreasing identification resources while increasing treatment resources (option c).

From the perspective of present public policy mandates, the most desirable option (option i) would involve increasing both identification and total service resources. The literature appears conclusive in stating that initiation of the special education process through identification without the followup steps of evaluation and provision of services cannot be justified for any other than accounting purposes. Without the initial identification, whether through screening or referral procedures, the child will not receive needed services. But

Table 21

Possible Strategic Options: Levels of Identification Versus Levels of Treatment and Followup

Identification resources	Treatment and followup resources		
	Decreased	Maintained	Increased
Decreased	a	b	c
Maintained	d	e	f
Increased	g	h	i

the child identified as handicapped and not given appropriate evaluation and programming may be worse off than before.

Evaluation

Diagnosis and assessment can both be considered part of the evaluation process but need to be distinguished from each other. The term *diagnosis* is derived from the medical model in which the determination of etiology leads directly to a prescribed treatment. Clarizio and McCoy (1976) explain:

> The concept and the term *diagnosis* come from the field of medicine. Etymologically, the term derives from the Greek and means "thorough knowledge." As used in medicine, diagnosis involved determination of the nature and circumstances of disease. More specifically, diagnosis permits the distinguishing of one disease from another by establishing mutually exclusive categories of illness. Diagnosis is based on a conception of disease as a condition or process that is characterized by (1) a common specific etiology, and (2) a common set of observable signs and symptoms, (3) a known course, and (4) a known outcome that, through specific interventions, can be altered.

For educational purposes, however, diagnosis usually refers to an evaluation procedure conducted in order to determine the appropriate classification of an individual child. In the context of Public Law 94-142, it can be seen as certifying that the child is eligible for special education services.

Assessment is differentiated from diagnosis in that assessment includes those evaluation activities designed to determine the present level of educational performance preliminary to identifying annual goals and short-term instructional objectives. In speaking of what assessment can be, Mercer (1975) uses this definition:

> This assessment will identify those children whose problems are school-specific. It will provide information on each child as a whole person who demonstrates his abilities in a variety of different roles in varied social systems. This information can be used to identify each child's competencies and can serve to move evaluation from a deficit to an asset model.

The Federal regulations include seven principles regarding evaluation as follows:

> At a minimum, that tests and other evaluation materials are provided and administered in the child's native language . . . have been validated . . . are administered by personnel who meet applicable certification of licensure requirements . . . ; tests and other evaluation materials . . . assess specific areas of educational need . . . ; the test results accurately reflect the child's aptitude or achievement rather than the child's impaired sensory, manual, or speaking skills . . . ; no one test or type of test or other means of evaluation is used as the sole criterion for placement . . . ; information from sources other than ability or achievement tests . . . is gathered and considered . . . ; the interpretation of the evaluation data and the subsequent determination of the child's educational placement are made by a team . . . knowledgeable about the child . . . ; if the information . . . results in a showing that the child does not . . . need instruction in a special setting, the child is not placed outside the regular instructional setting.

Higgins (1977) adds to these legal principles by suggesting five concepts that are specifically related to the assessment side of evaluation. These are:

> 1. Assessment is a continuous process. Assessment information forms the basis for all long-term and short-term goals and instructional objectives necessary to meet the child's special education needs.
>
> 2. Assessment information comes from multiple sources. . . . The information should indicate functioning levels of relevant skills to be acquired as well as the child's social-personal adjustment. Additional information collected from the home and community extends the reliability and validity of the assessment situation.

3. Labels do not indicate performance levels. . . . Assessment data should be collected only if the information will reveal or lead to the present levels of the child's functioning.

4. Assessments should be culturally and linguistically unbiased. . . . The assessment process should provide alternative and flexible procedures necessary to identify any cultural experiences that affect educational performance. . . . Procedures and instruments must be adapted for those handicapped students who cannot successfully perform with traditional methods and materials.

5. Assessments should be sensitive to the child's handicapping condition. If the child has little or no hearing and poor speech, for instance, then the person conducting the assessment would not want to use the verbal portion of the WISC.

It is important to note that the type of assessment required cannot be separated from program planning. If the purpose of the assessment is the development of an individualized educational program, a standardized uniform test battery, the traditional "complete work-up," may not be appropriate. Determining the specific expected outcomes is important in designing the assessment and must consider the initial reasons for identification of the individual child. Scholl and Schnur (1976) summarize the relationship between establishing goals for the assessment in relation to other considerations:

> The central question faced by examiners as they move into the assessment is to determine the goal of that assessment. In general, goals will be determined by the nature of the referral, by the setting in which the individual is being evaluated, and by the resources available for subsequent programming. Goals might also include program evaluation, research, or program monitoring as well as individual assessment. The examiner may wish to concentrate on measurement of rate or degree of change over time instead of measuring level of performance with the goal being determination of potential for growth or ability to learn. In this way measures may not only be used to evaluate student status, but may also be used as part of a larger procedure of continuous monitoring and feedback. Seen from this perspective, the question for assessment becomes one of deciding what strategy or approach will most effectively and economically gather the necessary data.

Once the assessment goals are determined, selection and use of assessment devices should also follow specified principles. Edgar and Hayden (1977) pinpoint several of these principles succinctly:

> Assessment devices should provide for the direct measurement of child behavior. These measurements need to include multiple data points, especially for the more

> severely handicapped. In order to obtain the most accurate results, assessment is best performed in a natural setting. The assessment materials should include objective developmental behaviors that are skill level appropriate for the children to be assessed. The information obtained from the assessment should be easily transformed to either educational plans or specific referrals for in depth assessment of possible secondary handicaps.

Evaluation Systems and Alternatives

Traditional methods of assessing children suspected of having physical, learning, or sensory problems have involved a medical examination and "a psychological."

> The traditional method by which psychometrists estimate the intelligence of individuals is to measure achievement relative to age norms; that is individuals are compared with respect to their relative mastery of the products of prior learning (Haywood, 1975).

Learning how a child compares to other children of the same age is useful if the goal is the determination of the degree of discrepancy between the child's general academic performance and that of other children. Haywood continues:

> It would seem that psychometric data are useful. We can learn something about the way in which a human being operates under controlled circumstances and on tasks which enable us to derive comparative estimates of ability.

Although information of this type may serve the purpose mentioned, it rarely provides the type of specific information necessary for program planning.

One alternative is the ecological or systems approach to assessment and program planning which is being increasingly advocated. Basic to this approach is consideration of the total context of the child's functioning. Hobbs (1975) states that:

> With this approach, the child is no longer the sole focus of assessment and intervention. Rather, the problem is seen as residing in the ecological system of which the child is an integral part. This system consists of the child's daily life. All parts of the system influence all other parts of the system. Physical and psychological as well as social factors are involved. Thus, assessments and interventions focus on the exchanges between the child, the settings in which he participates, and the significant individuals who interact with him. Each child's ecological system is unique. The objective is not merely to change or improve the child but to make the total system work.

Ecological assessment requires the close cooperation of the family, all school personnel, other professionals, and the child. The kind of evaluation that results from ecological assessment can be a profile of assets and liabilities of the child in a particular setting and at a particular time. Hobbs continues:

> The profile should describe physical attributes, including salient features of a medical, psychological, and educational evaluation. It should specify what the child can do and what he cannot do, what he can be taught to do, and what is expected of him. It should include people important in his life: parents, brothers and sisters, teachers, a social worker, perhaps, or a physician, other children, other significant adults, and also the people who make the profile and plan and carry out a program to help him. Settings are important too: the neighborhood, community center, church, the child's school, sometimes an institution. In effect, a profile of assets and liabilities describes the transactions between the child and people significant in his life, always in particular settings and at particular times.

Ecological assessment as described seems to lend itself to the development of individualized educational programs as required by Public Law 94-142.

A second alternative to traditional assessment procedures is the assessment of learning potential rather than measured intelligence. Assessment of learning potential involves teaching a previously unfamiliar skill or concept under standardized conditions to determine the child's learning potential under optimum conditions.

> The distinction of maximum performance testing versus typical performance testing of Cronbach (1960) recognizes the assumptions that in the former the individual is highly motivated and the test is measuring the limits of repertoire possible for the individual, as in intelligence testing. In typical performance testing, however, the assumption is that the testing is oriented to assess performance under typical motivation without concern for measuring the limits in the repertoire (Dyer, 1974).

In assessing learning potential, the test-teach-retest model is used to determine the child's ability to profit from a particular mode of instruction (Schucman, 1968). The Learning Potential Assessment Device (LPAD) (Feuerstein, 1970) assesses modifiability in which intelligence is defined as the capacity of an individual to use previously acquired experience to adjust to new situations. The structure of the LPAD tasks is based on three dimensions: degree of novelty and complexity of the task, the language or modality of presentation, and the variety of cognitive operations the task represents. Another variable included in the LPAD instrument is the examiner-examinee relationship. A major difference between the LPAD, a process-oriented assessment technique, and more traditional product-oriented techniques is explained by Haywood (1975):

> In standardized product-oriented assessment techniques, the examiner generally attempts to describe an individual's usual or typical way of functioning. There is no emphasis on eliciting an individual's best performance and, consequently, occasional high level responses are usually discounted as some kind of measurement error. Feuerstein (1970) sees these occasionally excellent responses as indicative of the child's ability to learn. The area of higher functioning may indicate a rare instance in which a lower class child learns. . . . Therefore, this rare response may predict modifiability more efficiently than the usual test responses predict ability.

An instrument increasingly used to measure learning potential is the Raven's Progressive Matrixes which utilizes the test-teach-retest approach. A version of the Raven Progressive Matrixes test, the Raven Learning Potential Test, has been developed and used by Budoff (1973) as part of learning potential research at the Research Institute for Educational Problems. His procedure yields a linear continuum of learning potential using three scores: pretraining scores reflecting present level of functioning, posttraining scores "representing the child's optimal level of performance following an optimizing procedure," and finally the posttraining score adjusted for pretest level to indicate the child's ability or capacity to benefit from training. Budoff sees a need for a "taxonomy of necessary or appropriate skills that facilitate educability." His recommendations, if implemented, would appear to meet Public Law 94-142's requirements concerning both evaluation and development of individualized educational programs. He says that:

> Given such a taxonomy, the task of assessment would be to describe an individual's pattern of strengths and weaknesses on these information-processing skills, and to design appropriate intervention strategies to develop these skills. Thus the task of the psychologist would change from classification and prediction to a concern with the child's present status in some finite area(s) of functioning, and his amenability to training on that function(s). The psychologist's contribution would be more closely related to the educational situation of the child, and might involve quite specific recommendations regarding how he might be taught, whether the teaching is done by the classroom teacher or remedial personnel.

A less formal approach to the assessment of learning potential has been proposed by Du Bose (1976) who recommends testing and observation under a wide variety of conditions and settings:

> The kinds of reinforcers that maintained a high level performance level and led the child to progressively more difficult tasks are valuable sources of information. . . . Procedures should include the amount of structure in the presentation of the tasks, the amount of adult assistance needed, the type of training that evoked optimal learning

> and the length of time the child was able to attend. Procedures that failed as well as those that succeed provide cues for future programming.

The use of the learning potential concept in psychological assessment has been used primarily with mentally retarded children. Its appropriateness for other groups cannot be assumed. Theoretically, such procedures appear to be relatively free of the biasing effects of language, culture, and handicapping condition.

Behavioral Assessment

Closely related to the learning potential approach is behavioral assessment. This technique attempts to interrelate assessment and instruction. Lovitt (1967) identifies components of behavioral assessment as including continuous behavior assessment, assessment of behavioral components that maintain and modify behavior, temporal arrangement of consequences of behavior, and environmental consequences that maintain behavior. Raschke and Young (1976) explain the interrelationship of behavioral assessment and instruction:

> The assessment component of the Behavioral Analysis system identifies the content and learning conditions best suited for a particular child. Academic and social skills which the child has yet to acquire, has learned, or is in the process of mastering, are determined as well as the events and stimuli which are functionally reinforcing or punishing to the child. The content and learning conditions are best assessed through a systematic sampling of learner performance on a number of tasks, under a variety of conditions.

A behavioral assessment program based on initial assessment, manipulation, and acquisition is being used at the Experimental Education Unit (EEU) of the Child Development and Mental Retardation Center at the University of Washington (Haring, 1974). The EEU utilizes the four point assessment programs of Lovitt, which includes baseline assessment, assessment of behavioral components, assessment based on referral, and generalization of assessment. Haring indicates that:

> Utilizing this method, diagnosis and treatment are based on direct observation of individual performance, not on the inference of one deviant behavior caused by a syndrome of interrelated events. Treatment concentrates on modifying specific deviant behaviors through strengthening behavior in a wide range of desirable, productive behaviors.

Various efforts at implementing behavioral assessment programs have been described (Gardner, 1971; Bricker and Bricker, 1973) with the focus of concern being the relationship of specific behaviors to definite stimuli or reinforcing events. Haywood (1977) identified three critical stages of functional analysis:

> First, the behavior of concern must be described so that it is possible to measure reliably the frequency or rate of occurrence of the behavior. . . . (Second), the conditions under which it occurs must be specified as closely as possible prior to intervention. . . . The third stage of functional analysis involves the testing of hypotheses of functionality that are generated from data obtained during the premanipulation baseline phase.

Both the learning potential and behavioral analysis approaches are similar in that the success of the assessment procedure is determined by the success of the intervention. Thus, immediate instructional goals should be the product of an assessment using either of these two methods. These two methods also seem to meet the requirements of Public Law 94-142 regarding evaluation with the possible exception that such assessments cannot be validated in the traditional sense in which norm-referenced measures are validated.

Criterion- Versus Norm-Referenced Assessment

The increasing wide range of assessment techniques that are being recommended and used include criterion-referenced as well as norm-referenced tests. Differences in the purposes of the two are distinguished by Wisland (1974):

> In norm referenced testing the individual's performance is discriminated along a continuum representing the population. Selection and classification of individuals for various treatment programs are the usual purposes for this type of testing. Criterion referenced testing measures the actual level of performance leading to the criterion, but does not discriminate among individuals. The criterion is some objective for accomplishment or material for mastery. The testing is thus a measure of degree of mastery. The criterion reference perspective in testing is utilized in such approaches as programmed instruction, self pacing curriculum programs, and operant techniques in classroom instruction and management where baseline data, progress level reports, and mastery tests are useful.

Norm-referenced tests seem to be most appropriate for student classification, while criterion-referenced measures are more helpful for individual program planning. The use of norm-referenced tests with a handicapped population presents a variety of problems, some inherent in the test and some particular to the handicapped group. Hammill (1971) has identified the problems as including a lack of test information that is directly translatable into instructional strategy, intrasubject variability (children with learning problems are particularly prone to wide fluctuations due to "good days" and "bad days"), overgeneralization of findings as when a child fails a visual-motor subtest item and is labeled as perceptually handicapped despite no observed perceptual disability in academic performance, and low test and subtest reliabilities. The most serious problem,

however, of using norm-referenced tests with handicapped children or culturally different children is the comparison with inappropriate group norms. When specialized norms are given for handicapped groups, these may also be inappropriate for some individual situations:

> Even those measures that do have some standardization with the visually handicapped present poor or unreplicated norms derived from a population that itself may be small, biased (e.g., only children in residential institutions), or very heterogeneous (e.g., varying degrees of vision, multiple impairments, etc.) (Scholl and Schnur, 1976).

In addition to the lack of appropriate standardization data for some disability groups, there is a similar lack of data for some areas of assessment. Adaptive behavior and social emotional adjustment are areas where the available norm-referenced measures are inadequate. There is a particular lack of appropriate measures, norm-referenced or criterion-referenced, for the evaluation of severely handicapped children (Haring, 1974; Delp, 1959), especially in the areas of social maturity, developmental skills, communication skills, and motor ability.

Norm- or criterion-referenced tests can be either formal or informal. Informal evaluation is frequently considered to be part of a total diagnostic teaching approach. Such evaluation is frequently administered by the teacher within the classroom setting and usually follows the formal assessment (Hammill, 1971). Optimally, the informal and formal aspects of assessment would occur simultaneously, making possible the continued modification of educational hypotheses about children.

The use of systematic observation techniques is also being recommended as an alternative assessment strategy. Observation in the home or other familiar setting may be particularly useful in assessing young or multiply handicapped children or adults. Observation in settings new to the individual is helpful in assessing such characteristics as adaptability and coping skills. Observation during trial experiences in placement settings or special diagnostic classrooms may be useful in determining learning style (Scholl and Schnur, 1976).

Nondiscriminatory Evaluation

The single largest issue identified in the literature on evaluation focuses on the equitable assessment of minority children. Recent years have seen an explosive amount of criticism develop concerning the use of standardized tests, particularly intelligence tests, with minority disadvantaged or culturally different children. Among the writers speaking to the issue are Mercer (1975), Laosa (1977), Newland (1973), Oakland (1973), Thorndike and Hagen (1969), Bernal (1977), Tucker (1977), Mercer (1973), Darcy (1963), Abbott and Crane (1977), Hewett (1977), and Cronbach (1975). Laosa (1977) summarizes the criticisms of standardized assessment practices as follows:

Standardized tests are biased and unfair to persons from cultural and socioeconomic minorities since most tests reflect largely white, middle-class values and attitudes, and they do not reflect the experiences and the linguistic, cognitive, and other cultural styles and values of minority group persons.

Standardized measurement procedures have fostered undemocratic attitudes by their use to form homogeneous classroom groups which severely limit educational, vocational, economic, and other societal opportunities.

Sometimes assessments are conducted incompetently by persons who do not understand the culture and language of minority group children and who thus are unable to elicit a level of performance which accurately reflects the child's underlying competence.

Testing practices foster expectations that may be damaging by contributing to the self-fulfilling prophecy which ensures low-level achievement for persons who score low on tests.

One of the negative effects usually ascribed to these practices is the disproportionate number of minority group children who tend to appear in classes for educable mentally retarded children. Mercer (1975), for example, reports a study which found that in one school system, 48% of the children labeled mentally retarded were Anglo-American, 36.5% were Mexican American, and 11.9% were Black. She contrasts this with the general distribution within the community of 78% Anglo-American, 13% Mexican American, and 5% Black. Among her major conclusions are that sociocultural factors should be systematically taken into account in interpreting clinical scores, and that psychological assessment procedures must not deny civil rights. Clearing these procedures has been recognized in Public Law 94-142.

Nondiscriminatory Assessment Alternatives

The literature review suggests that the search for "culture fair" tests seems to have subsided. Cronbach (1975) claims that such tests are not good predictors of success in schools and result in the same social class differences as traditional intelligence tests. Mercer (1975) has proposed a System of Multicultural Pluralistic Assessment which involves separate norms for children from minority groups to assess the child's standing in relation to others of his own background, standard norms to assess the child in relation to the general population, and the use of other measures to assess family background, behavioral, health, physical dexterity, and visual-motor characteristics. She has developed a statistical procedure that allows the child's IQ to be correlated with information about his or her family background.

Tucker (1977) and Mercer and Ysseldyke (1977) stress that the best insurance against biased assessment is comprehensive assessment using multiple sources of relevant data. Tucker stresses the need for all

of the following types of data: observational, language dominance, educational assessment, sensory-motor and/or psycholinguistic, adaptive behavior, medical and/or developmental, personality assessment including a self-report, and intellectual assessment. Mercer and Ysseldyke (1977) identify five assessment models and recommend that any nondiscriminatory diagnostic-intervention program employ a multimodal approach in which the child is viewed simultaneously from all five of the following perspectives: the medical model making use of any biological factors, the social deviance or social system model including assessment of the child's competence in the performance of social roles, the psychoeducational process model focusing on specific deficits, the task analysis model in which academic tasks are reduced into small behavioral objectives, and the pluralistic model which is an attempt to control for the cultural component of tests. These recommendations are consistent with the intent of Public Law 94-142 which specifies the use of a variety of assessment measures and the interpretation of the evaluative data by a team.

The Team

Quite clearly, it is the intent of Public Law 94-142 to insure that multiple professionals are appropriately involved in evaluation and placement activities to insure that the child's status and needs are considered from a variety of expert views. Such a thrust is widely and consistently echoed in the literature and in State policy as well. Higgins (1977) states that "Sound educational practice calls for team evaluation."

While the literature and policy are clear in recognizing the importance of these teams, it cannot be assumed that they function as conceptualized. Some reports (Hobbs, 1975; Patton, 1976) indicate that team meetings do not always produce team decisions. Yet to be assessed is the degree of meaningful participation of parents who are often under Public Law 94-142 seen as bona fide team members.

Reporting Evaluation Results

Teachers are frustrated, the literature indicates, when they refer a child for evaluation because he has a reading problem, only to be told after "a complete workup" that the reason is because the child is "dyslexic." Hunt (1975) suggested that, rather than helping, psychological reports destroyed teacher motivation for ingenuity in teaching activities. This accusation is also extended to intelligence data which are similarly not translatable into educational programming. Lovitt (1967) reminds the field that "The end product of an evaluation should be to present to the referring agent information that can be immediately transmitted into programming procedures."

Some additional charges regarding the traditional evaluation report found in the literature are that it provides justification for the child's failure to learn, excuses the teacher from developing and implementing an appropriate instructional program, and focuses on what is

wrong with the child, rather than on the instructional conditions which optimize a particular child's learning capacity. A characteristic of all the alternative evaluation strategies discussed earlier (ecological, learning potential, behavioral analysis, and systematic observation) is their focus on characteristics of the setting or methodology which have specific effects on the child. Lovitt (1967) explains a reporting procedure which stresses the communication of the environmental conditions that prevailed during the evaluation:

> Attempts are being made . . . to report diagnostic data to teachers in a functional manner. Data are reported which are relevant to each of the following: the antecedent prompts or instructions given during the evaluation, the exact material that was given the performer, the subsequent events that followed the child's responses, and the child's responses to the various programs. The assessment of explicit academic behaviors and the reporting of prevailing environmental conditions have facilitated diagnostic generalization. Thus, diagnostic generalization can be obtained when data are reported relevant to process and product rather than product alone.

Another potential difficulty with the use of interdisciplinary evaluation teams is that they can produce fragmented reports which are difficult for the placement team or teacher to interpret. Higgins (1977) recommends that either a common work sheet be developed and used by all evaluators or that one member of the assessment team review all history and assessment data and develop a general, summarized statement of current levels of educational performance.

Higgins (1977) says that:

> The strength of using either of these systems lies in the framework they provide for a better coordinated and profitable meeting to develop the individualized educational program. Once the multiple assessment data are presented in a manner that readily indicates the child's present level(s) of performance across domain areas, the process of continued development of the individualized program can take place. The next logical step is the determination of appropriate annual and short term instructional goals that it is estimated a child can reasonably attain within a year.

Of note in concluding this section are two of the three recommendations made by the National Association of Elementary School Principals (1975) concerning evaluation. They concluded that:

> 1. Parents and teachers need to be more actively involved in the planning and process of assessment.
>
> 2. Any results of assessment reported must include explanatory material that details the limitations inherent in these measures.

It can be conclusively stated that the directions taken in Public Law 94-142 regarding evaluation were reinforced by the literature.

Placement

All placement decisions that are to be made regarding the education of handicapped children according to Public Law 94-142 must be made within the specifications of the Individualized Education Program (IEP). Those elements of the IEP required by the law that deal more directly with the placement decision include:

> a statement of specific educational services needed by the child,
>
> a description of the extent to which the child will participate in regular education programs,
>
> a justification for the type of educational placement which the child will have,
>
> objective criteria, evaluation procedures, and schedules for determining, on at least an annual basis, whether the short-term instructional objectives are being achieved.

The concept of the IEP is intended to eradicate the sometimes used placement system of matching the child to various program openings rather than, if necessary, creating new or modifying existing programs.

Decision Making

Traditionally the purpose of the student evaluation was to determine whether the student was eligible for a particular placement, e.g., the educable mentally retarded (EMR) class. Terminology has reflected this emphasis with language such as "Admissions Committee" and "Student Placement Committee." The central position that the IEP now assumes changes the emphasis from the placement to the instructional program, radically changing the nature of the decision making process. Haring (1974) notes that:

> The educational assessment and diagnosis . . . has been broadly divided into two types of procedures: (1) those for determining if a specific disability exists or will be likely to develop, and (2) those for planning intervention or remedial strategies to aid the child in overcoming the disability.

The literature suggests that the role of the "admissions committee" has usually been to determine the presence of a specific disability, with the automatic assumption that if such a disability exists then placement in the special class for children so categorized is the appropriate action. Public Law 94-142, in contrast, clearly emphasizes

the second type of evaluation--assessment for program planning. Classification outcomes of evaluation may continue to be necessary for administrative purposes but are not directly applicable to IEP development. These two types of evaluation procedures might be translated into two types of decision making--institutional vs. individual decisions. In the institutional decision the decision maker is trying to maximize the benefit from a whole series of similar decisions. He seeks a consistent policy which will work best on the average over many decisions in the long run. The institutional decision maker must endorse a constant philosophy or value system while in the individual decision, the best course of action depends on the uniqueness of the individual and varies among individuals depending on their differing needs and values. Both institutional and individual decision mechanisms are required by Public Law 94-142: institutional for budgeting, development of State plans and local applications, and child count requirements; and individual for development, implementation, and review of an IEP.

As previously indicated, Public Law 94-142 clearly requires that placement decisions be a team effort. Decision making can no longer be discussed in terms of the single placement decision. Dyer (1974) says that individual:

> . . . decisions also may be approached sequentially, in which case the decisions form a long chain in a sequence of gathering information and assigning a temporary treatment until new information is obtained for further assignment. A decision making procedure that permits information at one point to determine what information will be gathered next is a sequential strategy. Necessarily the individual never leaves the hands of the decision maker unless he is assigned to no further treatment.

Whereas the decision making process has traditionally involved simply finding the student eligible or ineligible for a given categorical placement, now this decision is only the first of a series which includes defining educational needs, annually reviewing the appropriateness of the instructional program and placement, and revising both if necessary. The cycle continues until the child is no longer in need of special education services.

Since the IEP must be written in terms of needed services rather than available placements, a greater variety of program options must be developed.

> Historically, either a child was handicapped enough to go to a special class or the child was not handicapped enough and so might not get the appropriate support services. . . . Through the years and particularly over the past 10 years, schools have realized the inadequacies of this placement procedure. Today, many more program options are available in the schools. . . . Following the intent of the law, the justification for the type of placement must correspond to the specific educational needs of the child. The appropriate placement is the placement option that will meet those needs (Greer and Torres, 1977).

These program options may vary from regular class placement with consulting help through the provision of resource room services, special class placement, special school placement, and instruction within a residential program (Deno, 1971). Placement options need to be flexible enough to allow for changes in the services required by the child's IEP. The complexity of the program/placement decision is indicated by Gearhart who lists 11 variables that must be considered:

1. chronological age
2. type and degree of impairment or disability
3. age at onset (birth or acquired)
4. level of achievement
5. measured intellectual ability
6. social maturity
7. presence of multiple handicapping conditions
8. ambulation or mobility
9. success of past and present placement
10. wishes of student and student's parents
11. availability of services.

To be noted is that the last, availability of services, is no longer relevant.

The basis for conceptualizing the cascade of placement options was presented by Reynolds (1962) in which a variety of placements were indicated that were designed to respond to the intensity of an individual child's special needs. The greater the intensity, the greater the distance from the regular program. In 1977, Reynolds and Birch noted the distinct features of that model, which are summarized here. First, they said that it proposed that support be given to regular classrooms as one means of meeting the special needs of the children who are maintained there. Secondly, it proposed that children not be classified and given special placements on a permanent basis but, rather, that they be moved to special situations for only as long as necessary and that they be returned to regular classrooms as soon as feasible. Thus, no indelible labels needed to be involved. Thus, the total number of children served over time in special settings would greatly exceed the numbers served at any one time. Third, it proposed that the boundary lines between special education and regular education be renegotiated and opened so that students might pass back and forth easily, as dictated by their educational needs. Fourth, it proposed that regular and special education staff members become more interactive or collaborative in their daily work, such as sharing responsibilities for students, rather than remaining isolated in their separate spaces. Finally, it proposed that extraordinary justification be required whenever a child was removed from the regular school environment, especially when removal was from both home and school environments for placement in a residential center.

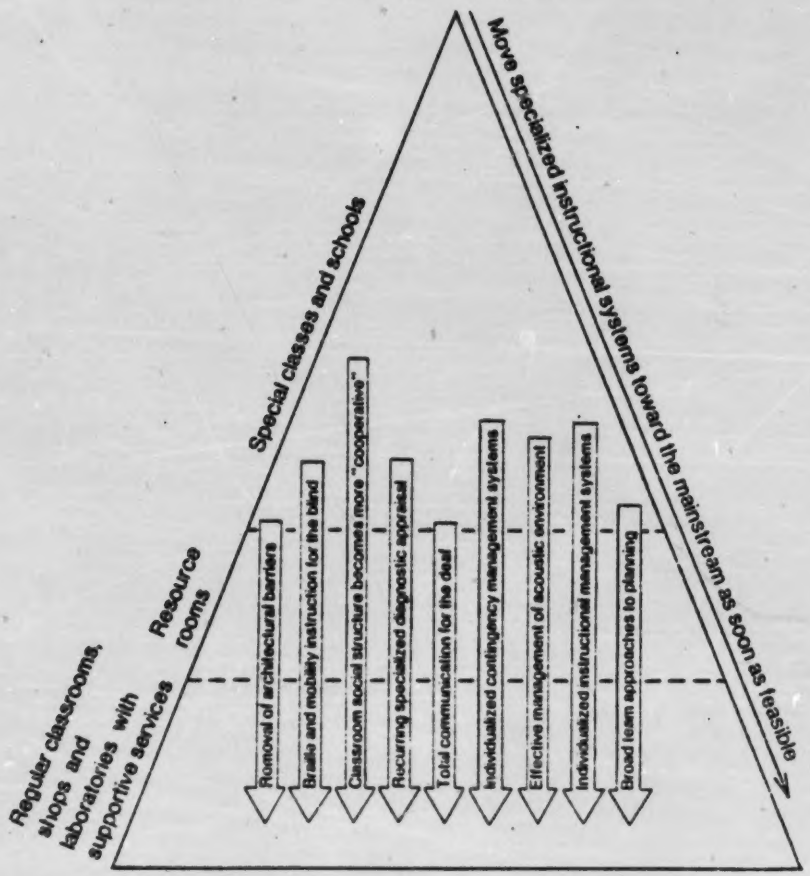
These same experts, however, criticize the cascade model for emphasizing administrative structures and places rather than instructional programs. To remedy their criticism, they have conceptualized another type of cascade which emphasizes the need for more consideration of individualized programmatic decisions. This model, they say,

proposes that regular classes be made more educationally diverse, which would diminish the need to develop and use separate specialized educational environments. Regular schools and classes should have diversified staffing and should offer many forms of individualized instruction programs so that a great variety of students could be accommodated.

Implementing such a policy would require that regular school spaces be treated acoustically and employ amplification devices, for example, so that students with limited hearing could be instructed in the regular spaces and still use their hearing. Such schools would have a variety of learning centers, equipment, facilities, and materials to serve students with special needs and preferences. Regular teachers would be challenged to become broadly resourceful in managing the diverse environment and serving the broad range of needs of a diverse student population. Special educators and other professionals with highly specialized knowledge and skills would be employed in collaborative teaching and supportive roles with regular teachers.

Table 20

Changes Occurring in the Cascade (Fewer Specialized Places; More Diverse "Regular" Places)


Move specialized instructional systems toward the mainstream as soon as feasible
Special classes and schools
Resource rooms
Regular classrooms, shops and laboratories with supportive services
Removal of architectural barriers
Braille and mobility instruction for the blind
Classroom social structure becomes more "cooperative"
Recurring specialized diagnostic appraisal
Total communication for the deaf
Individualized contingency management systems
Effective management of acoustic environment
Individualized instructional management systems
Broad team approaches to planning

Personnel and the Placement Decision

Patton (1976) indicates with regard to placement committees that:

> There are basically two ways in which these committees can fulfill their mandate to assure that the appropriate students are admitted to special programs. They can either actively participate in making the decisions or they can play a "watchdog" role.

Patton's study, however, indicated that in practice the multidisciplinary admissions committee in one California school district invariably accepted the placement recommendation of the psychologist. One way suggested to increase the effective involvement of all members of the interdisciplinary team is through a case coordinator (Hobbs, 1975; Williams et al., 1974; Higgins, 1977). Hobbs says:

> His job begins by defining the ecological system of a particular child who has been identified as in need of assistance. . . . He must work with all involved to identify the strengths that can be reinforced and relied upon and to pinpoint the sources of discordance. . . . He is responsible for seeing that successful strategies are selected and that unsuccessful ones are modified and replaced. . . . He must follow up all efforts on the child's behalf for a significant margin of time to be sure that no further help is needed.

The input of noneducational personnel, whether by membership on the placement committee or in the form of a written report, may be an important component of the placement decision, particularly for such handicaps as the orthopedically impaired, the health impaired, and the visually or hearing impaired. In many cases, the medical voice has been predominant and the physician's placement recommendation has been unquestioningly accepted. Increasingly it is felt that educational decisions need to result from the cooperative action of a variety of disciplines and must include those directly involved in implementing the instructional program, that is, the teacher or teachers, parents, and whenever appropriate, the child.

Closely related to the personnel composition of the placement team is the issue of accountability. The sequence of referral-evaluation-eligibility decision-educational programming-placement has not allowed for the clear designation of responsibility throughout the process. Involving those responsible for carrying out the IEP in its initial development seems to lead to increased accountability. Johnson (1977) affirms the need for renewing school placement systems. He recommends that accountability is enhanced if most of the handicapped are served within their local school with local school personnel making educational programming decisions. Additionally, the clear identification of one individual as the case coordinator increases accountability. Composition of the placement team usually varies depending on the nature of the handicap and particular State policies.

Definitions and criteria are static measures to determine child classification and program eligibility. In contrast, evaluation and placement can no longer be separated and should comprise a single smooth process in which evaluation information leads to program planning and implementation, which provides further evaluation information and program modification.

Age Differences in Definitions

Summary of the Literature Reviewed

For the most part, the literature review produced limited information regarding the applicability of age considerations in definitional issues. This is particularly true with regard to milder categories of handicap which are usually not sufficiently manifested in early years to permit reliable definition and identification. This is particularly true with regard to the learning disabled, educable mentally retarded and emotionally disturbed. To some degree, the transient nature of some of these problems and particularly the emotionally disturbed were described as complicating the definition of these children in terms of eligibility for and need for special education. With the "harder" categories, there is more literature emphasizing early and intensive intervention.

By and large, the definitions and the accompanying discussions of disabilities in the literature rarely include consideration of age. This appears to reflect an underlying assumption that disabilities impact equally at all ages, that they are permanent immutable conditions, and that the incidence of a specific disability is the same across all age groups. In contrast (1975) incidence estimates are that 12% of all school age children are handicapped, but that only six percent of all children from infancy to age five are handicapped. These figures imply that some children are not handicapped in the roles expected of them before school but are handicapped in the school situation.

The review of the literature indicated that the presence of behavioral and emotional disorders in children and particularly during the developmental years are often of a transient nature. In a study done in Tennessee (Glavin, 1972), 773 children in grades two through five were rated by teachers and peers as having or not having a behavior disorder. Three years later, only 30% of the children originally rated as having behavior disorders were similarly rated. It appeared that seventy percent of the children had improved without treatment to the degree that they were not singled out as behavior disordered. These results corroborate earlier findings that about 30% of children with behavior disorders exhibit persistent problems while 70% do not (McCaffrey, Cumming, and Pausley, 1963). The literature points out that the range of acceptable behaviors varies directly as a function of age so that behaviors considered quite normal and acceptable in the five year old may be a symptom of severe disturbance in a 13 year old child.

The decision of whether to place a young child who demonstrates an articulation or stuttering problem in a treatment program or to wait to see if the disorder is corrected as the child matures, is a subject of some controversy (Flower, Leach, Stone, and Yoder, 1967). On the other hand, the literature presents agreement that the hearing impaired need to be identified and provided special services as early as possible. It is stressed that the provision of hearing aids and the enrichment of the language environment during the language learning years can do much to prevent many of the long term communication problems of the hearing impaired. Opinions differ as to whether preschool programs for these children should emphasize maximum use of auditory skills (and thus

avoidance of manual methods) or the method of "total communication" which combines finger spelling and sign language with speech, speech-reading, and auditory training. Hewett (1977) suggests that every hearing impaired preschool child be first given the opportunity to learn through hearing. He feels that the introduction of manual communication into the preschool period emphasizes the visual modality over the auditory and is thus questionable for public school systems who have the aim of integrating hearing impaired children successfully into regular classes. Others argue that by requiring the child to first fail in learning language through the auditory channel valuable language learning time is lost and irreparable harm may be done to both the child's language development and self concept.

The literature indicates that the incidence of severe visual impairment or blindness is generally stable across age levels with the exception of the over 65 population, which is not relevant to this discussion. A significant number of adults with blindness are also present in today's society due to retrolental fibroplasia which was most notable in the decade following World War II prior to discovery and prevention (Jan, et al, 1977, Robinson, 1976). It is still reported that there are today some teenagers in the schools whose congenital blindness is due to excess oxygen at birth. Educationally, the critical distinction between the blind and partially sighted child is whether the child can read print (normal or large size) or must learn Braille. Reynolds and Birch (1977) point out that this decision is a difficult one and is usually made when the child is quite young.

> Some children with visual acuity measuring 20/400 may need braille while others will be able to read print quite adequately; the differences among such children are complex. Whether a particular child is taught to read print or braille may well depend on many factors other than visual acuity, such as intellectual ability, motivation, family support, available availability of expert professional help on the use of low vision aids, competency and attitudes of local teachers, presence of secondary handicaps, preferences of the child and other significant persons, and prognosis for improvement or deterioration of vision.

The lack of usual visual environmental stimulation for blind children results in a need to directly teach the young blind child concepts and behaviors (such as the use of facial expressions that sighted children learn through imitation to avoid the development of "blindisms" which are forms of self stimulation prevalent in younger blind children. It is likely that the blind child or severely visually handicapped child will need the most intensive special education during the primary grade years when concepts, orientation, mobility, and reading skills are being developed. With minor modifications and ample support services, the visually handicapped child of any age can usually be successfully educated in regular programs. Reynolds and Birch (1977) state:

> For the most part, children with vision impairments who are enrolled in regular school programs present a pattern of normal variations on traits other than in vision. Some of them may be slow in academic progress, some may need help by the speech clinician, some may exhibit worrisome emotional problems, but there is no clear pattern for all.

The importance of early identification and provision of remedial services to all severely handicapped children has been described in prior sections of this report.

Summary of the Literature Review

The literature pays considerable attention to educational and other similarities and differences between mild and severely handicapped children. Much discussion is devoted to the extreme difficulties in distinguishing between categories of mildly handicapped children, including the educable mentally retarded, the emotionally disturbed, and the learning disabled. It is pointed out by some authors that this differentiation problem exists whether etiology, personality adjustment, achievement, IQ, or educational program is considered. Also mentioned are the common difficulties encountered in attempting early identification of these children. Contrary to past popular opinion, some literature recognizes that full blown comprehensive evaluations might not be needed for the mildly handicapped as a matter of standard procedure. Finally, there is widespread support for the concept of the Individualized Education Program as the needed link between evaluation and programming.

Some similar threads of reasoning and comment can be found in the literature concerning severely handicapped children. The literature points out, for example, that while these children present considerable heterogeneity in terms of etiology, this tends to lose relevance as educational programming is initiated. The fact that this entire population is relatively new to public schools is reflected in some definitions of the population that have emphasized the static nature of the condition in terms unrelated to education. Discussions of the evaluation of these children often focus on the inadequacies of standard instruments and the necessity to consider adaptive behavior. Attending all of the recommendations regarding adaptive behavior are qualifying comments on the absence of acceptable norms and the necessity for more standardization work. On the other hand, the necessity for functional assessments of these children is emphasized as well as tying the results to the design of the program. The literature makes clear that, with appropriate evaluation of these children and precise task analysis underlying program design and delivery, learning will occur. A final concern in the literature is that more properly trained teaching personnel are needed to work with these children as programs increase.

Throughout the literature reviewed for this project, frequent reference was made to the mild-severe continuum of handicapping condition in isolation from and in consideration of educational implications. Those writing about these issues are generally associated with the noncategorical, antilabeling school of thought but fall into two categories. One is concerned with the severely handicapped population that has traditionally been excluded from public school services, while the other is concerned with the children at the other end of the continuum--the mildly handicapped. Both categories see a need for restructuring traditional approaches to these populations. This chapter presents these trends within the context of a larger issue, that of severity.

The discussion in the literature seems to center about three major questions:

1. Is it possible that determination of the severity of a handicapping condition may be of greater educational relevance than determination of the category of handicapping condition?

2. Do severely handicapped children across categories have any common special education needs?

3. Are the similarities or the differences among mildly handicapped children more significant to the teaching/learning process?

The importance of the concept of severity is well recognized in Public Law 94-142 and the accompanying regulations. As is well known, one of the original requirements of the Act was to provide services to the most severely handicapped out-of-program children as a first priority. The word *severe* is also used as an important qualifier in the Federal definitions to assist decisionmakers in determining which children are eligible for services for the Act and under which category. Specifically, the word is used in the Federal definitions as indicated below:

deaf: a hearing impairment so severe that . . .
deaf-blind: which causes such severe communication and other . . .
multi-handicapped: which causes such severe educational problems that . . .
orthopedically impaired: a severe orthopedic impairment
seriously emotionally disturbed

The use of the words *severe* and *seriously* (in the emotionally disturbed category) seems to assist primarily in determining an individual child's eligibility for membership in a categorical group and in subsequent program participation. Critics of this approach feel that insufficient recognition is given to the educational consequences and meaning given to the child's level of severity. One proponent of an alternative approach is Hobbs (1975) who, in a major recommendation of the Project on Classification for Exceptional Children, called for the replacement of traditional categorical systems of classification with a system based totally on severity of special educational needs. Use of this system would mean acceptance of only two major categories: Children in Need of Special Assistance and Children in Need of Prolonged Assistance. Given these two distant perspectives, the remainder of this chapter examines these issues more precisely.

The Mildly Handicapped

Nature of the Problem

Some of the literature stresses great similarities and consequent difficulties in discriminating for educational programming between mild

learning disabled, educable mentally retarded, and mild emotionally disturbed children, as well as some disadvantaged children. Collectively, the literature describes these children as being within a somewhat loose category of persons who have unusual difficulty with academic tasks for any of a large number of reasons. The children may be considered "slow learners," come from disadvantaged situations, have received inadequate instruction in previous grades, have auditory learning problems, poor language skills, or tendencies to disrupt the regular classroom or engage in other unacceptable behavior.

Elkins and Kirk (1974), in a survey of the types of problems of children receiving help in resource rooms, found two consistent (and usually simultaneous) problem areas: (1) nonachievement in academic subjects, particularly reading, and (2) a tendency to engage in disruptive behaviors. The cause of these problems, it is explained, is likely to vary from child to child and to be multiple within individual children. These children do, however, appear to have some common instructional needs, i.e., learning to read and learning to behave acceptably. Traditionally these children have been diagnosed as either mentally retarded or emotionally disturbed and, more recently, learning disabled. Oldridge (1977) calls them the "educationally out of step" students. Evaluation and programming were originally directly related to the category of handicap initially determined. A child given the label of "learning disabled" was likely to receive remedial instruction for a diagnosed perceptual problem. The same child, diagnosed as "emotionally disturbed," would probably receive a behavioral program and therapy. That same child, had he taken an intelligence test and scored below the IQ cutoff for the learning disabled and emotionally disturbed programs, would have been placed in a program for educable mentally retarded children and received a simplified type of instructional program.

Increasingly, however, educational programming for children in these three elusive categories has been gradually moving from attempts to ameliorate the basic causes of disability toward the provision of direct instruction to deal with educational needs. Thus, while the child is still likely to receive extensive evaluation based on his specific educational problems and perhaps placement based on the determination of disability, he will, however, receive essentially similar instruction. Redelheim (1973) states that "in many cases once the 'correct' label is applied, the prescriptive program for a child with one label is not different than the one for a child tagged with another label."

As indicated, this "group" is particularly hard to define. Lilly (1970) describes them as:

> those children traditionally labeled as educable mentally retarded, emotionally disturbed, behaviorally disordered, educationally handicapped, learning disabled or brain injured. . . . The one common characteristic is that they are referred from regular education programs because of some sort of perceived behavioral or learning problems.

Hallahan and Kauffman (1976) recommend that the term *learning disabilities* be applied to this entire group:

> Of what use, it may be asked, is the term, "learning disabilities"? It is, we believe, of the utmost utility if used as a concept rather than as a category. Literally, "learning disabilities" is a term indicating learning problems in one or more areas of development, and this definition is common to emotionally disturbed, learning disabled, and educable mentally retarded alike. Because children placed in each of these categories all have learning problems, "learning disabilities" can provide a much needed unifying theme whose emphasis is upon the specific behavior, abilities, and disabilities of the child.

Obviously this justification is based on perceived similarities among these three groups of children.

Similarities Among Mildly Handicapping Conditions

Hallahan and Kauffman (1976) discuss the commonality of etiological factors and teaching methods among learning disabilities (LD), emotional disturbance (ED), and educable mental retardation (EMR) and state that:

> With the exception of the lower IQ of the EMRs, no behaviors are specific to any of the three conditions. If one considers that mental age more than the IQ of the child is what should determine the teaching strategy, then even the IQ difference between the EMRs and the ED and LD children can be viewed as of trivial importance.

The lower IQ scores of the EMRs absolutely distinguish this group, of course, only because by definition children with such IQs are not usually included in the other two programs. Similarities among children found in these groups are being discussed by increasing numbers of authors (Hallahan, 1976; Kauffman, 1976; Cohen, 1977; Lilly, 1977; McCarthy, 1969; Koppitz, 1975; Bryan, 1977; Keough and Sitko, 1977; Prieto and Rutherford, 1977; Newcomer, 1977; Oldridge, 1977; Blackhurst, 1977).

Similarly common characteristics of the preschool child in the mildly handicapped category, regardless of eventual label, have also been described. Delayed speech and language, poor coordination, hyperactivity or other disruptive behavior, short attention span, low tolerance for frustration, and poor self-concept were mentioned by Gearhart and Weishahn (1976). During the elementary school years as well, specific academic problems (usually reading) and poor interpersonal relationships with teachers or peers have been noted with children in these categories. In adolescence these children are the poor achievers, the alienated, and frequently the school dropouts. Rarely do they only possess an emotional problem, or only low ability, or only a perceptual or neurological

learning disabled, educable mentally retarded, and mild emotionally disturbed children, as well as some disadvantaged children. Collectively, the literature describes these children as being within a somewhat loose category of persons who have unusual difficulty with academic tasks for any of a large number of reasons. The children may be considered "slow learners," come from disadvantaged situations, have received inadequate instruction in previous grades, have auditory learning problems, poor language skills, or tendencies to disrupt the regular classroom or engage in other unacceptable behavior.

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Implications for Identification

Early identification of mildly handicapped children cannot be assumed to be totally effective. The advantages of potentially preventive instruction must be weighed against the potential disadvantages of lowered parent, teacher, and self-expectations that frequently occur as a result of the labeling process (Keogh and Becker, 1973). Newcomer (1977) suggests that these children do not appear to differ from nonhandicapped children in benefiting from an appropriate preschool and kindergarten program. A further problem is the lack of validity of preschool tests in identifying children with special needs. Nevertheless, an argument is often made that remediation of the psychological processes underlying the disability as well as enrichment efforts (Heber, 1972) can prevent much later disability.

During the school years children in the mildly handicapped category are usually identified through referral by the regular classroom teacher. Hewett (1977), Harth and Glavin (1971), Bower (1969), and Nelson (1971) have reported that teacher ratings alone are quite effective in identifying children with mild emotional problems, especially children with conduct disorders. Educable mentally retarded children are usually identified through teacher referral for academic failure and through low scores on group IQ tests. Mercer (1973) has described the typical process through which a child is identified as mildly retarded. First, the child is enrolled in public schools (she found that few parochial schools nominated children as mentally retarded). Second, the child achieves the status of normal student within the regular classroom even though he or she may be in the lowest reading group. Third, the child had been retained in the same grade. Mercer found that 2.5% of special class students had been retained at least once prior to special placement. Finally, Mercer says, the child is referred by the teacher and/or principal for full testing and evaluation. Mercer concludes that academic failure and low IQ score appear to be the predominant reasons for identifying children as educable mentally retarded.

Sometimes the mildly handicapped are simply not identified and thus are not provided needed special services. Wallace and Kauffman (1973) have noted:

> Until very recently . . . few schools have attempted to use any systematic procedures to identify incipient problems because special services have been available only for those children with the most obvious and disturbing learning deficits (Morse, Cutler, and Fink, 1964). There is little point in identifying problems for which no services are available. Identification under such circumstances highlights the inadequacy of the schools and tends to create pressure for inappropriate solutions.

A number of studies (such as Hogenson, 1974; Anderson, 1972) have documented that mildly handicapped children, whether classified as mildly retarded, learning disabled, or behaviorally disordered, are most likely to drop out of school or become delinquent.

Implications for Evaluation

Newcomer (1977) notes that students generally found in the "mild" categories do not require a full evaluative "workup." He states:

> In the first place, since many special education students characteristically differ little from their peers, there is no reason to assume that they have internal deficits which prevent learning. Consequently, efforts to discover the etiology which underlies their learning deficits are largely superfluous. Second, while some of the diagnostic instruments used with special education students are useful to understand children's learning problems and to prescribe instructional activities, many are not. They are simply not related closely enough to academic competencies to be used as designators of specific teaching activities for nonachievers. Third, the focus on learning problems as child-centered disorders ignores or at least de-emphasizes the fact that learning is an interactive phenomenon and that failure to learn is often intricately associated with breakdowns in a child's relationship with teachers and peers. More specifically, it may not be sufficient to diagnose and remediate children's academic difficulties in settings removed from the regular classroom if the problems interfering with learning relate primarily to the experiences the child has within the regular classroom.

Oldridge (1977) suggests that these students could probably be best served by a task-analytic remediation program with no need for traditional or formal diagnostic procedures. Koppitz (1975) recommends evaluation in six nontraditional areas for these students: inner control, intersensory integration, reasoning, emotional adjustment, social adjustment, and developmental and social background. He sees the first three as being measures of the intactness and maturity of the central nervous system while the last two are to serve as measures of environmental experiences. Prieto and Rutherford (1977) stress the importance of an ecological assessment of the mildly handicapped in which teachers are trained to assess each of the child's "niches" (roles) as either positive or negative. Despite differences, the literature is agreed that the mildly handicapped require an evaluation which, while not ignoring etiology, focuses on specific instructional needs and on both the student and the environment.

Implications for Placement

Newcomer (1977) and Oldridge (1977) recommend that special education services to mildly handicapped students be discontinued. Newcomer suggests the use of a special teacher consultant who works directly with regular teachers on improving skills in areas that include instructional techniques and behavior management. Sontag's (1977) proposal that special education be reorganized to include early childhood education, general special education, and severely handicapped education offers a

framework that is intended to deal with the major conclusion of the literature regarding the mildly handicapped. That conclusion is, specifically, that children who are categorized as educable mentally retarded, mild emotionally disturbed, and mild learning disabled seem to possess more similarities than differences in etiology, social behavior, academic difficulties, and learning needs. It appears that this consensus in the literature is a statement that should underlie the significance and the process governing the Public Law 94-142 Individualized Education Program which includes placement.

The Severely Handicapped

Nature of the Problem

The review of the literature reveals that overall the severely handicapped appear to be a more heterogeneous group than the mildly handicapped. This population includes children who are severely or profoundly retarded, severely emotionally disturbed, severely orthopedically handicapped, and severely health impaired. Although a case could be made for including serious deafness and blindness in this category, this is not the usual placement of these two categories. BEH has recognized the severely handicapped as a special group in this definition from the Code of Federal Regulations:

> A severely handicapped child is one who, because of the intensity of his physical, mental, or emotional problems, or a combination of such problems, needs--educational, social, psychological, and medical services beyond those which have been offered by traditional regular and special educational programs, in order to maximize his full potential for useful and meaningful participation in society and for self-fulfillment. Such children include those classified as seriously emotionally disturbed (schizophrenic and autistic), profoundly and severely mentally retarded, and those with two or more serious handicapping conditions such as the mentally retarded-blind and the cerebral palsied-deaf. Such severely handicapped children may possess severe language and/or perceptual-cognitive deprivations and evidence a number of abnormal behaviors including: failure to attend to even the most pronounced social stimuli, self-mutilation, self-stimulation, manifestation of durable and intense temper tantrums, and the absence of even the most rudimentary forms of verbal control, and may also have an extremely fragile physiological condition (45 CFR, 1974 ed., 121.2).

Justen (1977) points out several difficulties with this definition. First, the main criterion is one of present exclusion from services. "As the description is based solely on the criterion of exclusion from past programs, it gives little in the way of a description of use to the development of new programs." It would also seem obvious that with a zero reject policy mandated, diagnosis based on previous exclusion

becomes less and less useful and more a matter of conjecture. Another objection to this BEH definition is in its lack of parameters to delimit this population (Sontag, 1977; Justen, 1977).

Another definition of the severely handicapped has been developed by Abt Associates (1974). According to this definition:

> "severely" handicapped children and youth were those persons age 21 and under who are either mentally retarded, emotionally disturbed, deaf-blind, or multiply handicapped and who exhibit two or more of the following behaviors with a degree of regularity:
>
> - Self-mutilation behaviors such as head banging, body scratching, hair pulling, etc., which may result in danger to oneself;
> - Ritualistic behaviors such as rocking, pacing, autistic-like behavior, etc., which do not involve danger to oneself;
> - Self-stimulation behaviors such as masturbation, stroking, patting, etc., for a total of more than one hour of a waking day;
> - Failure to attend to even the most pronounced social stimuli, including failure to respond to invitations from peers or adults, or loss of contact with reality;
> - Lack of self-care skills such as toilet training, self-feeding, self-dressing, and grooming, etc;
> - Lack of verbal communication skills;
> - Lack of physical mobility including confinement to bed, inability to find one's way around the institution or facility, etc.

This definition differs from the BEH definition in that it does not depend on previous exclusion from public school programs and also because it attempts the behavioral approach. Whether it is the best definition for use in considering the educational setting might be questioned. A bright cerebral palsied student might exhibit two of these characteristics (such as lack of mobility and self-care skills) and yet still perform educationally above grade level. Under the Abt definition he/she would be severely handicapped.

Another, more educationally oriented, definition has been offered by Justen (1977), the previous critic of the BEH definition. This definition might be more appropriate for consideration of educational setting and less appropriate for other service areas such as rehabilitation.

> Educationally speaking, the term "severely handicapped" refers to those individuals age 21 and younger who are functioning at a general developmental level of half or less than the level which would be expected on the basis of chronological age and who manifest learning and/or behavior problems of such a magnitude and significance that they require extensive structure in learning situations if their education needs are to be well served.

Justen's explanation of the two parts of this definition notes that general developmental level refers to functioning in the combined areas of intellectual, social, and motor development. Developmental level is meant to be an interaction between the person's intellectual and adaptive behaviors. The second part of this definition specifies that the learning and/or behavior problems are of such magnitude that extensive structure is required in learning situations. Justen gives examples of such modifications as eliminating extraneous events from the environment, using modified tools and instruments for the child to manipulate, and establishing a low teacher/pupil ratio.

Justen claims that an advantage of this definition is that an individual who meets the criteria for severely handicapped at one stage of life might not be so classified at another stage. This recognizes the position that severe educational handicaps are not stable nor irreversible conditions. This definition is described as directly applicable to educational programming and placement in that the severely handicapped child would in effect be defined by his educational need for a highly structured special setting. In quantifying developmental level at less than one-half, all of the familiar problems regarding validity and reliability of common evaluation instruments, especially those for the measurement of adaptive behavior, must again be recognized. Additionally, situations can be imagined where a child requires a great deal of structure (the hyperactive learning disabled child) but does not have a developmental level below half of that expected for the child's chronological age. Such children must be recognized as what they present and must further not be inappropriately placed as a function of using a particular definition. What must be considered is that increased structure, detailed task analyses, and increasingly specific instructional objectives appear to be the direction reported in the literature of most special education programs for all disabilities at all levels of severity.

Implications for Identification

The literature presents no disagreement that this population requires early identification and intervention (Donlon, 1976; Ray, 1976; Hayden and McGinness, 1976; Brickner and Iacino, 1976; Hayden and Edgar, 1977; Vincent and Broome, 1976). Haring (1976) states that a critical principle "in programming for severely handicapped pupils is to have access to them at the earliest possible time." In fact, Haring claims that most severely handicapped children can be identified very early, that 50% of children subsequently recognized as severely

handicapped including the severely retarded can be identified as "educationally high risk" by one month of age. Parmelee and Michaelis (1971) have developed a listing of behaviors and characteristics to assist in identifying the high risk neonate. Further a number of infant screening tests have been developed (Barnard and Douglas, 1974; Frankenburg, Dodds, and Fandal, 1970). The literature does cite the significant but as yet unrealized potential of the Federal Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program under Medicaid which is designed to identify and treat children at high risk for serious handicaps earlier than has been done in the past. What must be recognized as well, however, is that incidence of these handicaps is spread across the socioeconomic spectrum and that no single system will sufficiently lead to the identification at an early age of all of these children.

Implications for Evaluation

Difficulty in evaluation of the severely and profoundly handicapped and multi-handicapped is a prominent issue found in the literature (Haring, 1976; De Spain, 1975; Hayden and Edgar, 1977). Differential diagnosis for children with multiple impairments, particularly when one or more is considered severe, creates a problem for the educational or psychological evaluator. According to Thurman (1976):

> Sensory-impaired retarded children should not be classified and defined in a rigid categorical manner but should be viewed as a function of their individual physiology, their previous reinforcement histories, and the contingencies of reinforcement presently existing within their environments. Simply put, children should be dealt with according to their own individual level of behavioral functioning and sensory deficit, regardless of the administrative or sociological label attached to them.

The complexity of psychological assessment for severely and profoundly retarded children, as discussed by Faris (1976), is due to their frequent difficulty with expressive and receptive skills, perceptual and motor deficiencies, and gross physical abnormalities. The literature recognizes that, traditionally, assessment of severe handicapping conditions has not been a major educational concern, for these children were either excluded from school programs altogether or were placed in caretaker situations. For such children, it was sufficient to record a significantly low or undeterminable IQ on their "future" files. However, providing an appropriate educational program for all children regardless of severity as is required by Public Law 94-142 substantially changes the situation. Faris (1976) said:

> Those now charged with the education of these children, whether in the public schools or in residential facilities, must employ far more comprehensive procedures that will provide a sound rationale for the various educational decisions that must be made.

The literature consistently encourages professionals to develop detailed assessment of the child's functioning and conditions under which current behavior occurs. The alternative to using psychometric tools suggested by some is to establish relevant educational goals for individual children that are developed as a result of a functional assessment of each child. Further, the goals must be established in accordance with those behaviors deemed necessary for an individual to operate adequately and competently within his environment (Thurman, 1976). A number of formal and informal assessment instruments are suggested to extend information found through standardized instruments. As yet conclusive evidence regarding effective adaptive behavior scales or performance tests does not appear to exist in the literature. Studies are currently being conducted to eliminate weaknesses and enhance their effectiveness for educational assessment and programming.

Implications for Placement

Traditionally the severely handicapped have been excluded from public school because there were no programs and because their clear legal basis in being there was not established. Phrases like "unable to profit from instruction" in State laws and regulations exempted them from compulsory education laws. Under Public Law 94-142 this situation has completely changed. The severely handicapped now have the highest priority for special education programming under the law.

Authors (Haring, 1976; Williams, 1976; Faris, 1976; Kauffman and Snell, 1976; and Williams and Gotts, 1975) agreed that instructional methodology presently exists to teach these students who formerly were "unable to profit from instruction." Behavioral analysis and behavior modification, some (Raachke and Young, 1976; Bricker and Bricker, 1973; Cone and Hawkins, 1977; Meichenbaum, 1977) suggest, provide the means to bring these students to much higher levels of functioning than previously thought possible. For the severely handicapped student, the long-term goals stated in the Individualized Education Program must build upon detailed task analysis--making the individual instructional steps smaller (slicing the behavior into finer and finer points), as discussed by Cohen, Gross, and Haring (1975). Numerous authors also agreed that assessment and programming must be continuous and interrelated functions:

> The basic progression is this: By using assessment data to determine what skills a child has and has not mastered and those developmentally appropriate skills he or she should master, the teacher can begin to prioritize instructional concerns. The teacher selects an appropriate target skill from the developmental sequence and programs instruction for that skill, slicing the instructional components as finely as necessary for the child to master all of the target behavior's prerequisite skills (Haring, Hayden, and Beck, 1975).

Finally, Sontag (1977) raises questions about whether severely handicapped children are in fact a separate category, since they represent the most severe needs across all disability areas. He recommends a type of organizational plan in which education for the severely handicapped would be one of three categories:

> Severely handicapped education represents one of three global instructional areas under a reorganization plan which would include early childhood education and general special education as the other two areas. Assignment of children to the new areas would be according to the nature of the children's service requirements and, indirectly, on the basis of the competencies of teaching personnel.

Under this proposal, which is based upon services needed, severely handicapped children would receive instruction in basic self-skill development (self-help, motor, perceptual, cognitive, and communication skills) and potentially be moved into the general special education program to receive preacademic and academic instruction.

When discussing the provision of programs to these children, the literature mentions that the technical skills required to teach the severely handicapped are in fact different from those needed by teachers of the mildly or moderately handicapped. The frequent presence of medical problems that require continuous monitoring and the heavy involvement of therapists requires that educational programs for these students be closely allied with medical and therapeutic personnel. In fact, as the severity of the handicap increases, there is a corresponding increase in the involvement of medical and medical-type personnel. Hart (1977) discusses the vital role of a team serving these children that includes such persons as the audiologist, the speech therapist, the occupational therapist, the physical therapist, and the physician. Sontag, Burke, and York (1973) commented about the importance of teaching competency for this group:

> In our view, there is a direct relationship between the level of the students' disability and the competencies of the teachers, i.e., the more pronounced the level of disability, the more specific and precise are the competencies required for the teachers.

Universities are rapidly developing special programs for training teachers of the severely handicapped (Sailor, Guess, and Lavis, 1975). Also developing are training programs for paraprofessionals to work with these children (Tucker and Horner, 1977). Finally, concern is also expressed within the literature regarding the teaching personnel shortage caused by the sudden influx of these children in programs. This shortage is frequently handled by inservice training programs and the issuance of temporary teaching certificates.

Section IV

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APPENDIX A

CHARTS

STATE POLICY DEFINITIONS IN RELATION TO P.L. 94-142

CHART I

STATE POLICY DEFINITIONS OF MENTAL RETARDATION

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Definition/Policy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	+
Educable/Mild	x	x	x	x			x	x	x	x	x	x	x	x	x		x	x		x	x		x	x	x	x
Trainable/Moderate	x	x	x	x			x	x	x	x	x	x	x	x	x		x	x		x	x		x	x	x	x
Severe-Profound								x	x	x		x			x		x			x	x					x
• Subaverage General Intellectual Functioning	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+		-	-	+	+
• Adaptive Behavior	+	+	-	+	-	+	-	-	+	+	+	+	+	+	-	+	-	-		+	+		-	-	+	+
• Developmental Period	+	-	-	-	-	+	-	-	+	+	+	+	-	-	-	-	-	-		-	+		-	-	-	+
• Educational Performance Affected	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+		+	+		+	+	+	+
Other Criteria	May result from brain damage after developmental period. EMR 56-80, TMR 30-55 IQ	IQ 1 2/3 S.D. below mean. Adaptive and language below age expectation.	Adult prognosis.	Mild IQ 2 standard deviation below mean. Moderate IQ 3-5 standard deviation below mean.	IQ 2 S.D. below mean. Parental consent for placement.	IQ 1 3/4 S.D. below mean.	Excludes custodial child, unclean body habits, unresponsive to directions, no intelligible communication.	EMR 50-75, TMR 30-55, SMR 0-29 IQ.	Excludes social or functional retardation	EMR 2-3 S.D. below mean, TMR 3-5 S.D. below mean, PMR below 5 S.D.	EMR 2-3 S.D. below mean. TMR 1/3-1/2 normal intellectual functioning. PMR more than 3 S.D. below mean.	Aspects of programming.	EMR 2-3 S.D. below mean. TMR below 50 IQ.	Ages 3-21. Eligible only as long as benefit is determined to exist.	EMR 60-75 IQ. TMR 35-60 IQ. SMR below 35 IQ.	IQ more than 1 S.D. below mean.	Refers to AAMD Classifications.	EMR 50-75 IQ. TMR below 50 IQ.		EMR 1/2 - 3/4 normal development. TMR 1/4 - 1/2 normal development. PMR 0-¼ normal development.	EMR 2-3 S.D. below mean. TMR 3-4 S.D. below mean SMR 4-5 S.D. below mean.		EMR 2-3 S.D. below mean. TMR 3-4½ S.D. below mean.	EMR 1/2 - 3/4 normal development. TMR 1/2 - 1/3 normal level. Adult prognosis.	EMR 1/2 - 3/4 normal functioning. TMR 1/3 - 1/2	EMR 1/2 - 3/4 normal development. TMR 1/2 or less

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART I

MENTAL RETARDATION

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY
Definition/Policy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	-	+	+
Educable/Mild	x	x	x		x	x	x	x	x	x	x		x	x	x		x	x	x	x	x	x			
Trainable/Moderate	x		x		x	x	x	x	x		x		x	x	x		x	x	x		x	x			
Severe-Profound	x		x		x			x					x	x											
• Subaverage General Intellectual Functioning	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+		+	+	+	+	+	+		+	-
• Adaptive Behavior	+	+	-	-	+	+	-	+	-	+	-	+	+	+	-		+	-	+	+	-	+		+	+
• Developmental Period	+	-	-	-	-	-	-	+	-	-	-	+	-	+	-		-	-	+	+	-	-		+	-
• Educational Performance Affected	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		-	+	+	+	+	+		+	-
Other Criteria	IQ below 1.6 S.D. from mean or 75 IQ.	Adult prognosis	EMR 50-75, TMR 30-50, SMR below 30 I.Q.	Ages 0-21	Adaptive behavior may be educational handicap due to linguistic or cultural differences. EMR 2 S.D. below mean. TMR 3.5 S.D. below mean. Adult prognosis		EMR 1.5-3 S.D., TMR 3 S.D. below mean	EMR 50-75, TMR 30-50, SMR below 30 IQ.	EMR 50-75, TMR below 50 IQ. Adult prognosis	EMR 50-80 IQ	EMR 50-75, TMR 30-50 IQ. Adult prognosis.	IQ 2-3 S.D. below mean	Deviant behavior patterns not included. EMR below 80 IQ, TMR below 55, SMR below 30 IQ.	Mild 52-68 IQ, Moderate 51-36 IQ, Severe 35-20 IQ, Profound below 19-using Stanford Binet & Cattell.	None		None	EMR 2-3 S.D., TMR 3+ S.D. below mean.	EMR 55-75 IQ, TMR 40-60 IQ. Use multiple diagnostic instruments.	EMR + TMR 1/2-3/4 of normal development. Excludes severe.	EMR 2-3 S.D. below mean. TMR 3 or more S.D. below mean. Not educational or linguistic disadvantaged.	EMR 51-75 IQ. TMR 30-50 IQ. SMR below 30 IQ.		None	Includes congenital or accidental defects.

CHART II

STATE POLICY DEFINITIONS OF DEAF AND HARD OF HEARING

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Combined Definitions/Policy	+		+	+	+	+	-	+			+		+	+	+		+	+	-	+	+	-	+			
Deaf Definition/Policy		+		+			-		+	+		+	+		+	+			-			-		-	+	+
Hard of Hearing Definition/Policy		+		+			-		+	+		+	+		-	+			-			-		-	+	+
• Impaired in Processing linquistic information thru hearing	+	-	-	+	-	+	-	+	+	+	+	+	+	+	-	+	+	+	-	+	+	-	+	-	+	+
• Adverse Effect on Educational Performance	+	+	+	+	+	+	-	+	+	-	-	+	+	+	-	+	+	+	-	+	+	-	+	-	+	+
Other Criteria	Cites characteristics of hearing impaired.		Capable of being educated	Loss 65-40 db.	Included under physical impairment										Congenital, adventitious		Part of continuum of communicative disorders.				Defines as an aspect of communication disorders pre-linqual, post lingual deaf.		Encompasses varying types and degrees of auditory deficit.			Includes audiological and educational interpretations for deaf.	

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART II

DEAF - HARD OF HEARING

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	+TOTAL
Combined Definitions/Policy	+		+		+	+			+				+	+	+	-		+			+	+	-	+	-	27
Deaf Definition/Policy		+		+	+	+	+	+	+	+	+	+		+		-	+		+	+			-	+	-	25
Hard of Hearing Definition/Policy		+		+	+	+	+	+	+	+	+	+		+		-	+		+	+			-	+	-	24
• Impaired in Processing linquistic information thru hearing	+	-	-	+	+	+	+	-	+	+	+	+	+	+	-	-	+	+	-	+	-	-	-	+	-	33
• Adverse Effect on Educational Performance	+	+	+	-	+	+	+	+	-	-	+	+	+	+	+	-	-	+	+	+	+	+	-	+	-	37
Other Criteria	Included under physically handicapped.	Person of sound mind. Acoustically handicapped is included under physically handicapped.			Auditorilly handicapped. Defines levels of loss.		Defines levels of loss				Lists characteristics of both.		Ranges from mild (hard of hearing) to profound (deaf)					Auditorilly handicapped.				Covers both deaf and hard of hearing.		Describes characteristics of conditions.		

CHART III

STATE POLICY DEFINITIONS OF ORTHOPEDICALLY IMPAIRED AND OTHER HEALTH IMPAIRED

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Combined Definition/Policy					+	+	+	+		+	+				+	+	+	+	-	+	+	-		-	+	+
Orthopedically Impaired Definition/Policy	+	+	+	+					+			+	+	+					-			-	+	-		
• Conditions - Congenital, disease, other	+	+	-	+	-	-	-	-	+	-	-	-	+	-	-	+	+	-	-	+	+	-	+	-	-	+
Other Health Impaired Definition/Policy	-	+	-	-					+			-	+	+					-			-	+	-		
• Conditions - Limited strength, vitality, alertness	-	+	-	-	-	-	-	-	+	-	-	-	+	-	-	+	-	-	-	+	+	-	+	-	-	+
• Adversely Affects Educational Performance	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	-	+	+
Other Criteria		Physically handicapped includes physical and motor disability.	Intellectual development such that he is capable of being educated...			Cites educational characteristics impaired.	Includes pregnancy.			Includes pregnancy.				Intellectual development such that they are capable of being educated...Requires adaptation of physical plant.				Of sound mind. Intellectual development capable of being educated. . .							

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART III

ORTHOPEDICALLY IMPAIRED AND OTHFR HEALTH IMPAIRED

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	+TOTAL
Combined Definition/Policy	+	+	+	+		+		+				+	+	+		-		+	+	-	+		-	+	-	27
Orthopedically Impaired Definition/Policy	+	+			+		+		+	+	+				+	-	+			-		+	-		-	19
• Conditions - Congenital, disease, other	+	+	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	-	20
Other Health Impaired Definition/Policy	-	-			+		+		+	-	-				-	-	+			-		+	-		-	10
• Conditions - Limited strength, vitality, alertness	+	+	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	-	16
• Adversely Affects Educational Performance	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	-	+	+	-	-	+	-	-	+	-	41
Other Criteria	Includes inadequate speech, hearing, vision.	Includes inadequate speech, hearing, vision, retarded.	Average or above intelligence.							Capable of profiting from instruction.					Of sound mind.			Of educable mind								

A-7

CHART IV

STATE POLICY DEFINITIONS OF SPEECH IMPAIRED IN RELATION TO P.L. 94 - 142

States With No Definition of Speech Impaired	State Requirements As Stated Appear Consistent With P.L. 94-142 Definition	State Requirements as Stated Appear Less Than P.L. 94-142	
		No "Adverse Affect On Educational Performance" Requirement	Not Consistent With Respect to Language of "Communication Disorder"
CT	AZ MS	AL	CA
LA	AR NM	AK	KY
MA	CO NC	DC	MO
MN	DE ND	ME	NB
MT	FL OK	OH	NV
SD	GA OR	WA	NH
WV	HI PA		NJ
WI	ID RI	Total = 5 + D.C.	NY
WY	IL SC		OH
	IA TN		
Total = 9	KS TX		Total = 9
	MD UT		
	MI VT		
	VA		
	Total = 27		

CHART V

STATE POLICY DEFINITIONS OF VISUALLY HANDICAPPED

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Definition/Policy	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	-	+	+
• Educational Performance Affected	-	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	-		+	+		+		-	+
• Includes Blind and Partially Sighted	+	+	-	+	+	+		+	+	+	+	+	+	-	+	+	+	+		-	+		+		+	+
Other Criteria	Acuity 20/70-20/200. Field 20°.	Acuity 20/200. Field 20°.		Acuity 20/70 or less. Field 20°.		Acuity 20/70 or less. Field restricted.		Blind-Acuity 20/200, Field 20°. Partial sight 20/70 or less.	Acuity 20/70 or less.		Functionally blind characteristics.	Acuity 20/200, Field 20°. Acuity 20/70.	Education-related characteristics.		Acuity 20/200-20/70. Field 20°.	Education-related characteristics.	Acuity 20/200-20/70. Field 20°.		Excludes legally blind.	Acuity 20/70 or less. Field 20° or less.		Acuity 20/70 or less. Field 20°.		Acuity 20/70-20/200 or less. Field 20°.	Acuity 20/70-20/200 or less. Field 20°.

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART V

VISUALLY HANDICAPPED

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	+ Total
Definition/Policy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	-	+	-	44
• Educational Performance Affected	+	+	+	+	+	+	-	+	-	+	-	-	+	+	+		+	+	+	+	+	+		-		36
• Includes Blind and Partially Sighted	-	-	+	+	+	+	+	+	-	+	+	+	-	+	+		-	+	+	+	+	+		-		35
Other Criteria			Acuity 20/70-20/200. Field 20° or less.		Acuity 20/70-20/200.	Acuity 20/70-20/200 or less. Field 20°.	Acuity 20/70-20/200 or less. Field 20°.	Acuity 20/70-20/200. Field 20°.	Acuity 20/200 or less. Field 20° or less.	Acuity 20/70 or less.	Acuity 20/70-20/200 or less.	Acuity 20/70-20/200 or less. Field 20°.		Acuity 20/70-20/200 or less. Field 20°.						Acuity 20/70-20/200. Field 20°.	Acuity 20/70-20/200.	Acuity 20/70-20/200.				

CHART VI

STATE POLICY DEFINITIONS OF SERIOUSLY EMOTIONALLY DISTURBED

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Definition/Policy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	+
• Duration/Degree	+	+	-	+	+	+	+	-	+	+	+	+	-	-	+	+	+	+		+	-		+	-	+	+
• Adverse Effect on Educational Performance of Child	-	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	-	+		+	+		+	+	+	-
x Characteristics (learning relationships, inappropriate behaviors, depression, physical symptoms)	x					x				x			x		x	x	x	x		x	x		x		x	x
• Includes schizophrenic, autistic	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-		-	-		+	-	-	-
• Excludes socially maladjusted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-		-	-		-	-	-	-
Other Criteria	Lack of coping and behavioral control.	Includes deficiencies in group participation understanding self and environment.		Hinders learning atmosphere of educational setting.		Behavior interferes with learning of classmates.		Includes neurological impairment.				Excludes temporary problems.		Includes behavior disorder								Disrupts learning process of other students		Ineffective Coping behavior		Behavioral Disorders

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART VI

SERIOUSLY EMOTIONALLY DISTURBED

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	+TOTAL
Definition/Policy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	-	+	-	46
• Duration/Degree	+	-		-	+	+	+	-	+	-	-	+	+	+	-		-	-	-	-	+	+		+		29
• Adverse Effect on Educational Performance of Child	+	+	+	+	+	+	-	+	+	+	+	+	+	-	+		-	+	+	+	+	+		+		38
x Characteristics (learning relationships, inappropriate behaviors, depression, physical symptoms)	x	x					x	x	x			x	x	x			x				x			x		
• Includes schizophrenic, autistic	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-		-	-	-	-	-	-		-		6
• Excludes socially maladjusted	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-		-	-	-	-	-	-		-		2

Other Criteria

- Inhibits educational rights of others.
- Educationally handicapped.
- Includes those with sufficient intellectual and emotional capacity to become responsible and self supporting.
- Hinders others in class from profiting from classroom experiences. Must be educable.
- Can profit from instruction
- Failure to adapt and function at age level.
- Demonstrate adequate intellectual potential
- Discrepancy of age-achievement.

CHART VII

STATE POLICY DEFINITIONS OF MULTI-HANDICAPPED

IN RELATION TO P.L. 94-142

CRITERIA	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Definition/Policy	+	+	+	+	+	+	-	+	+	-	+	+	-	+	+	+	+	+	-	+	+	-	+	-	+	-
• Concomitant Impairments	+	+	+	+	-	+		+	+		+	+		+	+	+	+	+		+	+		+		+	
• Severe Educational Problems not accommodated in other programs	+	+	-	+	-	-		-	-		+	+		-	+	+	+	+		+	+		+		+	
• Excludes Deaf-Blind	-	-	+	+	-	-		-	-		+	-		-	-	-	-	+		+	-		-		-	
Other Criteria	One handicap is physical, visual, hearing, or combination. Other is emotional or developmental.	None	Serious learning and developmental problems	Serious learning, developmental and/or behavioral problems	Included in physical handicap.				Excludes disadvantaged, environmental factors.		Physical or sensory handicap. Programs for physical or mental handicap not effective.			Ages 3-21.			Cites characteristics involved.	Serious learning, developmental and/or behavioral-emotional problems.		Includes developmental, educational, behavioral problems.			Handicaps in physical and cognitive domains.			

Legend

+ Required by P.L. 94-142 and similar language is found in state policy
- Required by P.L. 94-142 but similar language not found in state policy
x Present in state policy but not required by P.L. 94-142

CHART VII

MULTI-HANDICAPPED

CRITERIA	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	+ Total
Definition/Policy	+	+	+	-	+	+	+	+	+	+	-	-	+	+	-	-	+	+	+	+	+	+	-	+	-	37
• Concomitant Impairments	-	+	+		+	+	+	+	+	+			+	+			+	+	+	+	+	+		+		35
• Severe Educational Problems not accommodated in other programs	-	-	-		-	+	+	-	-	+			-	-			+	+	+	+	+	-		-		21
• Excludes Deaf-Blind	-	-	-		-	+	-	-	-	-			-	+			+	-	+	-	-	-		-		9
Other Criteria		Physical and/or psychological handicaps				Serious learning, developmental, behavioral problems.				Severe communication, behavioral, developmental, educational problems.							Includes severe functional disabilities.									